JAN 16 1928

The

British Medical Journal

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

Including an Epitome of Current Medical Literature
WITH SUPPLEMENT.

No. 3495. SATURDAY, DECEMBER 31, 1927. Price 1/3

TRADE MARK **'WELLCOME'** BRAND **SERA**

ARE

ALL BRITISH

Prepared at:
THE WELLCOME PHYSIOLOGICAL RESEARCH LABORATORIES

Supplied by:
BURROUGHS WELLCOME & CO.
LONDON

H. 2594

COPYRIGHT

Rheumatism

RHEUMATOID ARTHRITIS
ARTHRITIS DEFORMANS

Good Results are certain if you use-

ELIXIR FORMASAL Co

IN CONJUNCTION WITH

TAB. ARTHRITONE

"I use your Formasal and Arthritone in all rheumatic cases, with uniform good results. Long-standing cases showing marked ankylosis yield fairly rapidly under this treatment, and I say unhesitatingly that your preparation is a boon to the busy practitioner." —— M.B., Ch.B., etc.

Clinical Samples Available-

HOUGH HOSEASON & Co. Ltd. MANCHESTER

PHARMACEUTICAL SPECIALISTS TO THE MEDICAL PROFESSION

OVALTINE

FOR INSOMNIA.

Sleeplessness is a common feature of Neurasthenia. The value of "Ovaltine" in this condition is exceptional. A cup of "Ovaltine" taken upon retiring allays nervous irritability, and the patient passes into a natural and healthful sleep.

As evidence of the value of "Ovaltine" in Insomnia the following extracts from unsolicited medical reports are noteworthy:

"The patient slept the first night I used 'Ovaltine,' but I thought it merely a coincidence. By continuing its use, however, I am convinced of the value of 'Ovaltine' to induce sleep."

"In a case of Neurasthenia associated with sleeplessness and difficult feeding I gave my patient 'Ovaltine.' To my great satisfaction 'Ovaltine' was retained without difficulty, and rapid improvement followed."

"Ovaltine" is a rich concentration of the vitalizing principles of malt, milk, and eggs. Its delicious flavour and its high nutritive and digestive qualities render it a food beverage of outstanding worth.

A liberal supply for clinical trial sent free on request.

A. WANDER, Ltd., 184, Queen's Gate, S.W.7.

Works: KING'S LANGLEY, HERTS.

M.205

An Address
ON
CLINICAL RESEARCH BY THE FAMILY DOCTOR.

DELIVERED AT THE ANNUAL MEETING OF THE ABERDEEN BRANCH OF THE BRITISH MEDICAL ASSOCIATION,

BY

A. MAITLAND RAMSAY, M.D., LL.D.,

HONORARY DIRECTOR, JAMES MACKENZIE INSTITUTE OF CLINICAL RESEARCH, ST. ANDREWS.

THE position in which the doctor is placed immediately after graduation is really the outcome of the progress of medicine from the earliest times down to the present day. It has taken centuries for the healing art to emanicipate itself from superstition and the thraldom of authority. The reformation began on the day in the second century that Galen boldly, almost insolently, cast aside the old commonplaces of authority, tradition, and general consent, and put his finger on the pulse with the intention of trying to predict from the variations in its beat the course of the disease from which a patient was suffering. Here was the dawn of a new era in medicine, and from that time onwards the physician became a clinical observer. He had, however, nothing to help in his work except his highly trained senses and a mind stored with the results of his past experience.

As the centuries passed advances were made from time to time by men who were pioneers in their own day and generation, but the great awakening came when Virchow, about the middle of the nineteenth century, attempted to systematize all previous knowledge by his doctrine of cellular pathology. His work was epoch-making, and its fundamental importance was quickly recognized. Its keynote was the thorough study of the structure of the organs of the body; the science of pathology gradually developed, and its discoveries had a profound influence on the practice of medicine. Laboratories were built, and laboratory technique became greatly improved, and the practical application of morbid anatomy to clinical medicine resulted in the discovery of physical signs, by means of which the physician was enabled to discover evidence of organic disease in the living subject. Definite objective evidence now in great measure took the place of the study of symptoms, and led to a classification of diseases based on *post-mortem* appearances. Structure, therefore, was thought to be of more importance than function, and the end-results of disease were minutely investigated, while its causation and its early stages were relatively neglected. Intense microscopical examination of pathological specimens was the order of the day, and led to the discovery of micro-organisms. The nature of those minute forms of life, and the part they play in the causation of disease, were now eagerly discussed, and research workers were attracted from the study of alterations in structure to the investigation of disorders of function.

Physiology now came to the forefront, and was recognized as the only basis on which scientific medicine can rest. What may be called the descriptive stage of medical study was gradually superseded by an experimental stage. Laboratories and laboratory methods were again greatly extended, numerous instruments of precision were invented, and the activities of the pathologist were no longer confined solely to the *post-mortem* room. He took a share in the examination of the patient and called himself a clinical pathologist. In those early days of the study of disordered function the physician and the clinical pathologist were frequently combined in one person. That was a very satisfactory arrangement, but it did not last long, because as methods of examination became increasingly complicated the pathologist tended more and more to isolate himself in his laboratory and to lose touch with the clinician. He also began to bring to the solution of his problems the spirit and the methods of research in the exact sciences. His ambition was to make his observations definite and unambiguous, and so it came about that the clinician, oftentimes worried and disappointed by his failures at the bedside, became tempted more and more to appeal to the laboratory worker to provide him with a test which would give a short cut to diagnosis. This passive attitude on the part of the clinician led to the assumption of a rather aggressive attitude by some laboratory workers, who claimed that all research for the advancement of medicine ought to be left in their hands.

As a result of this unnatural distinction between practice and research the methods of the clinician, through which so much had been achieved in the past, tended to fall into the background. That was a retrograde step, because the true aim of all medical research is to reconcile the results of laboratory examination with the clinical symptoms. Much purely laboratory investigation has failed for want of clinical direction. It is true that phenomenal results have followed experimental research, but it must not be forgotten that some of the most notable achievements in medicine have been accomplished by men whose life was spent far removed from laboratories or seats of learning. Take four examples: Harvey was an obscure physician struggling to make a living when he first began to think of the circulation of the blood; Jenner, amid the worries and vexations of a country practice, discovered vaccination; Koch was a district physician when he began his investigation on tuberculosis; and Mackenzie was a busy general practitioner when he laid the foundations of his epoch-making work on the heart. The best progress is likely to be made when clinician and laboratory worker pull together, each realizing the difficulties of the problem constantly encountered in general practice, and both determined that those difficulties shall be solved as a result of their mutual efforts. Some pathologists who have been trained wholly in laboratories are quite ignorant of the problems which confront the general practitioner in the course of his daily work. They are impatient of clinical observations, which they say are wanting in scientific precision, but they are only too easily led astray by the apparent exactitude of physical and chemical formulas.

When dealing with living tissues one cannot depend wholly upon rigid mechanical fidelity; formulas cannot be applied in the expectation that the result will be obtained with strict mathematical precision; there is not a rule and a measure in all things. Pain cannot be measured by any instrument of precision, yet it is one of the most valuable symptoms of disease. The true value of the laboratory in the study of clinical medicine is enhanced rather than lessened by a frank recognition of its limitations.

Although there is no reason to think that the principles by which medicine is governed are materially different from those governing other arts and sciences, yet the methods of the sciences allied and ancillary to medicine cannot be applied without certain reservations. The problems of disease are more complicated and difficult than any others with which the trained mind has to grapple. Each individual case presents its own problem, and therein has its special interest. Nature is constantly performing experiments in the laboratory of the human body, and although the reactions, the results of those experiments, are far too delicate to be measured by test tube or balance, yet they are revealed by the occurrence of symptoms.

The methods of research in clinical medicine are therefore peculiar to itself, and the kind of knowledge necessary to detect the earliest symptoms of disease can be best cultivated by the general practitioner, because it is he alone who sees disease in its initial stages. It was for that reason that the late Sir James Mackenzie founded the Institute for Clinical Research in St. Andrews. He insisted that it is only the general practitioner who has the opportunities for clinical research into the early stages of disease—that is, before the patient's disability is sufficient to take him to hospital. He, and he only, has the key enabling him to recognize disorders while prevention is still possible.

Many of the great teachers of the past were to all intents and purposes general practitioners. Laboratory methods were unknown to them, and they possessed few instruments of precision, but they studiously cultivated their own powers of observation, and taught their students how to use their unaided senses. The neglect of this form of education renders the medical student of the present day less self-reliant in diagnosis and prognosis than many

of his predecessors. What has been gained, therefore, in one direction has been lost in another.

Mackenzie firmly believed that the family doctor could do as much to advance the science of medicine as any worker in a laboratory, and the goal of his ambition was to find ways and means to enable him to become a research worker. The idea of founding an institute for clinical research had long been present in his mind, and when the opportunity came he left London at the very zenith of his fame and settled in St. Andrews. He realized that his plans, as he conceived them at that moment, could only be carried out in a town of small size with a comparatively stationary population. In a letter which he wrote on the day before he died, he says:

> "When I left London I dared not tell anyone the real reason of my leaving, for it would have been looked upon as a piece of folly. For years I had been gradually becoming convinced that the whole tendency of research was on wrong lines: it was devoid of fundamental principles, was haphazard, and could not supply the kind of knowledge which would enable us to solve medical problems. It was with the object of searching for this principle that I undertook, at the age of 65, the burden and responsibility, which were very heavy, of starting an institute for the purpose of this quest."

So it came about that the James Mackenzie Institute was founded in St. Andrews. For five years it enjoyed the immeasurable advantage of Mackenzie's presence and direction, and his great and forceful personality dominated its work. The general practitioners of the district gathered round him, and week after week they sat down together to discuss problems of far-reaching influence on the progress of medicine. He spoke to those family doctors like an elder brother, and all felt that to be associated with him was both an education and a revelation. His teaching has opened a great and unforeseen road in clinical medicine. He ever insisted on the habit of accurate observation, and while not fond of controversy for its own sake, or even contradictory, he was ready at all times not only to defend vigorously the exactitude of his own work, but combative and eager to fight in defence of his own opinions. His writings are all based upon his own carefully recorded observations. He always insisted that departure from health is made manifest at its onset by sensations experienced by the patient, and that failure to detect disease in its earliest stages is due to the fact that the patient's sensations are not systematically investigated.

With rare sagacity Mackenzie formulated certain principles underlying the production of symptoms, contending that in medicine, as in physical and chemical science, although the phenomena of disordered action are many and varied, the causes underlying their production are few. He founded his institute to develop those principles, to put them in practice, to test their accuracy, and modify them in the light of experience. He was never satisfied unless he was testing constantly and improving in detail. He had no sympathy with those who never change their mind, and, far from apologizing for inconsistency, he would denounce consistency as an evidence of mental sterility and an attribute of those who have no mind to change. Nevertheless, although he might be ready to admit that he was wrong on Monday he would be equally positive that he was right on Tuesday, and if called upon to argue in favour of his opinions he always spoke with intense conviction.

There are many who believe that the secret of progress in medicine is to be found only in the laboratory, and choose that walk in life rather than engage in general practice because they consider that it is the only way to study medicine scientifically. The scientific spirit, however, is not the exclusive property of the laboratory worker. It is inborn in the individual, and whoever is possessed of the true scientific spirit can bring it to bear in the solution of any problems with which he is confronted in the course of his daily work. The observant physician possessed of the critical faculty can do more to advance medicine by his work at the bedside than many who lead a sheltered life in a laboratory. The investigator who aims at extending the boundaries of knowledge must have initiative and courage, and above all must possess vision, for without that uncanny power of seeing into the nature of things and discovering secrets hidden from others the laboratory worker may obscure the path of progress and become a real danger to the advance of knowledge.

The chief purpose of a laboratory training is not to teach the students how to use elaborate instruments or to perform complicated chemical tests. The incalculable gift of the laboratory is its discipline in scientific method, and its training in the importance of logical reasoning and the use of exact language in speaking and in writing. The scientist is always distinguished from the empiricist by his accuracy in measurement, by his precision in statement, by his honesty in accepting and handling evidence, and by his fairness in presenting it when contesting the opinions of those in opposition to his own views. In that sense every general practitioner should be a research student, and the family doctor ought to train himself to employ scientific method at the bedside in the same masterly manner that it is used by the worker in the laboratory.

Clinical medicine in the past has been so much a matter of personal skill and experience that when the clinician dies his work dies with him, whereas the results of investigations in a laboratory are recorded so carefully that something tangible always remains to enable one worker to take up a subject at the stage where another has finished. There can be no doubt that skill in diagnosis, and more especially skill in prognosis, must always be largely a matter of individual experience; but if such valuable knowledge, gained during a studious life, is not to be lost when he who accumulated it dies, some means must be found to provide a foundation on which future investigators may build. That is one of the chief aims of the Clinical Institute, where accurate observations of the disturbance of the processes regulating the function of the different organs of the body are carefully recorded. The cases are reviewed at regular intervals, when all the symptoms are reconsidered, and an attempt is made to distinguish those due to disturbances of those processes which are essential to the maintenance of life from symptoms due to the interference with processes which are not essential to life. The "follow up" is of the first importance in all records, because without it the case is of no clinical value; what is wanted is the patient's medical life-history, consequently the disease must be under observation from its onset to its termination.

It is generally supposed that the greater the number of patients a doctor sees the greater his experience and his knowledge. That is only a half-truth, because a doctor may see hundreds of patients, and be most meticulous in recording the symptoms during a passing phase of the disease, and yet be none the wiser regarding the prognostic significance of any one of them. Mackenzie always insisted that "prognosis is the motive which inspires note-taking with the breath of life, making the notes a perennial source of knowledge that can be applied in the practice of medicine."

What is needed most of all is that the research student in the laboratory should get into closer touch with the realities of clinical medicine, because any cleavage between the laboratory worker and the general practitioner impoverishes both. There is no life in the ordinary text-book on laboratory methods. The doctor in the country finds little use for tests he cannot readily apply at the bedside of his patient. The clinician can never be replaced by the laboratory worker. Each is complementary to the other; each has much to give and much to gain. I can well believe that the laboratory worker does not realize how much the clinician has lost in recent years by his reliance on the laboratory for help to diagnose disease, when by a careful study of symptoms he might have recognized it for himself. We must look to the living to learn the laws of life, not to the dead. The true clinician never gets into a rut. He at all times feels the sense of adventure and discovery. He must always have an open mind, and when, in the course of research, facts are discovered which are opposed to accepted theories, these hypotheses must be abandoned even although supported by high authority. Work of that kind requires much persevering effort and much patient waiting for proof, but the goal aimed at must always be indisputable accuracy. No evidence can be accepted without the most rigid scrutiny.

The clinician must try more and more to think in terms

of the normal rather than of the abnormal. It cannot be repeated too often that the symptoms of disease are only the premature occurrence of the signs of exhaustion due to over-exertion of the organ when in a state of health. It will be a great gain when the experimental physiologist gets into the habit of leaving his laboratory from time to time in order to visit the wards, the dispensary, and the operating theatre under the guidance of the physician and the surgeon.

A new clinical physiology is much to be desired—a physiology which deals with the symptoms of ill health and tries honestly to estimate the functional activity of every organ of the body. The more those apparently simple matters are investigated the greater will be the regret and astonishment to find so many gaps in our own knowledge. Mackenzie never tired of trying to drive that fact home. He took a delight in astonishing his visitors by such questions as the following: Why does cancer kill a man? What is it that kills him? Why does he die? At those times his conversation was fascinating and stimulating, but sometimes very puzzling and bewildering. It was necessary to admit that usually the questions he asked, although going to the very root of the matter and proving how ignorant we are of some of the most fundamental problems of life, are in the present state of our knowledge unanswerable. Doubtless, by the advance of science and the increase of knowledge, those problems will one day be solved, and I venture to predict that the family doctor will play an important part in their solution.

VILLAGE SETTLEMENTS FOR THE CONSUMPTIVE.

ABSTRACT OF THE MITCHELL LECTURE FOR 1927.*

BY

P. C. VARRIER-JONES, M.A., M.R.C.S., L.R.C.P.,

MEDICAL DIRECTOR, PAPWORTH VILLAGE SETTLEMENT.

PERHAPS in no disease more than in tuberculosis has the outlook changed so much in recent years. With the progress of modern research its horizon has widened, its problems have multiplied, and the work to be done increased. Indeed, the medical profession is marching, on the whole, abreast of the time, for it is now recognized that in that common disease tuberculosis a number of conditions must be studied and provided for—a complex involving medicine, sociology, psychology, and economics.

A diseased organ is now considered in relation to its environment. Formerly it was only the affected organ apart from the rest of the body that attracted attention; but gradually the conception of the interaction of organ and organism and the interplay of forces, "resistance," and immunity were taken into account. It is now essential to go a step further by recognizing that environment plays an important part, not only in the propagation of, but also in the fight against, disease. The recognition of this factor of environment makes it possible to combine the purely medical measures directed towards cure with the medico-social effort designed to prevent disease. As soon as the social aspect of cure and prevention is established educational health work takes its rightful place in the State.

Now it is obvious that if these ideas are to be carried into effect the opportunity must be provided for putting them into practice. An environment must be provided in which the following considerations have due weight: the functional power of the damaged organ within the organism must be protected so as to avoid excessive strain or, indeed, further impairment, and the patient as a whole must be so situated as to avoid opportunities which may impair his power of resistance and recuperation. Those ideas represent a great advance on that of the mere passive or active treatment of disease by ordinary therapeutic measures. Their acceptance presupposes a field of vision extending far beyond hospital or laboratory walls. It postulates a study of social and economic laws too often neglected by the medical profession. It opens up a new field for research and an ever-widening scope of industrial conditions of employment—and not of the healthy only, but of those who, on account of their disability, cannot keep pace with the able-bodied, and who, even if they could keep pace, are potential "carriers" of disease.

Gradually the State attempted—and not without success—to grapple with the disease, both from the individual and from the community point of view. Sanatoriums were erected all over the country, some managed by private philanthropic agencies, others by local authorities, counties, or county boroughs. It was soon obvious that the poor required further care after the period of early treatment had been completed. Statistics show that from 27 to 64 per cent. of patients die within five years after leaving the sanatorium, a great majority of them dying within the first two years.[1]

It is intelligible why patients do not enter a sanatorium until the disease is well established. The early symptoms of pulmonary tuberculosis are so vague that it is quite natural that the patient's attention should not be seriously challenged by them. Thus it is that the consulting physician, and even the family doctor, too often never sees the patient until the disease has done much of its insidious work. The reasons for the failure of early diagnosis, and still more of early treatment, lie in "human nature" and in economics. Is it not because in the case of the well-to-do the human factor, and in the case of the working man the economic factor, has been ignored, that a system for the treatment of patients has been built up at a stage when they do not, and so far as can be seen at present will not, come up for treatment? For such cases our large sanatoriums are waiting; and wait in vain.

It has been said that 25 to 55 per cent. of the cases of pulmonary tuberculosis remain unnotified to the local authority,[2] and that the cases that are notified come for the most part from those on the lower rungs of the social ladder. On the higher rungs the notifications gradually become fewer, and finally, near the top, cease altogether. Are we to assume that in the higher social scales tuberculosis is rare or unknown? Observation convinces me that this is not so; the condition is recognized, but it is too vexatious to be faced boldly and promptly. It is therefore not surprising that sanatorium treatment in the majority of cases does little more than patch up the damaged organ; it is far from assuring complete arrest of the disease. One of two courses must eventually be adopted: either sanatoriums must adapt themselves for the treatment of cases without any prospect of complete arrest of the disease, or a new system must be inaugurated which will do so; further, in addition to whichever of these possibilities is adopted, preventive measures must be taken to stop the spread of infection.

It must, however reluctantly, be admitted that in 75 per cent. of the patients now sent for treatment to our sanatoriums complete cure is out of the question. Efforts to obtain the case early will quite rightly continue to be made; but how to deal with those in whom the disease can at best be only arrested is a most difficult problem, for in more than 50 per cent. of the cases now seen in sanatoriums arrest is far from permanent.

The most difficult problem, and the most frequent patient, is the man or woman in whom the disease has had its way for some considerable time and in whom permanent damage has been done. Were the main problem of tuberculosis, as is constantly stated, the treatment of the early case, and this only, why are there all these schemes for after-care, farm colonies, and the like? The sanatorium, with its adjunct the dispensary, should meet all requirements. But this condition is now known to be a figment of the imagination; the reality is much more serious, for it forces itself upon attention and unjustly emphasizes the failure of sanatorium and dispensary. The position must be reconsidered. The popular opinion, built upon certain findings of pathologists in laboratory work, that tuberculosis is a fairly curable disease, does not stand the test of clinical results.

How different is the picture of the treatment of early tuberculosis from that observed day in and day out in a tuberculosis dispensary, where seriously damaged patients

* Delivered before the Royal College of Physicians.

are crowded together, waiting for the cure which never comes, supported by small doles of food and medicine which prolong a pathetic and fruitless existence, with nothing but failure and disappointment at the end of it. Little or no effort is made to provide conditions permanently suitable for the patient's relief, and for the most part he is left to drift, or is beguiled by ignorant advisers to embark on reckless adventures. Must it not be confessed that the system of tuberculosis dispensaries and sanatoriums, as now carried on, is founded upon a wrong reckoning?

Various schemes have been inaugurated to consolidate the position of those who, after a period of sanatorium treatment, have reacted well. These have been described as hardening-off processes, and both in this country and America have been followed with keen interest. The colony was started almost entirely with the object of prolonging sanatorium treatment on more economical lines. It was soon observed that certain patients, with a localized and early lesion which had become wholly or in part healed by a term of sanatorium treatment, and patients whose general resistance to the disease was great, benefited to no small extent by light employment in the open air; but when patients, even when most carefully selected, were advised to follow a similar occupation after leaving the colony the result was seldom successful.

In training tuberculous men for reinstatement in industry we are attempting what is well-nigh impossible. The organism is damaged, and damaged for ever, and the ordinary industrial environment is unsuited for its life. Add to this the incubus of providing for a family, and the position clearly becomes impossible. Tuberculosis is a fluctuating disease, and as such needs continuous medical care. It needs a thorough understanding of the principles underlying both health and industry, all of which can only be carried out under a special scheme.

The principles underlying Papworth and the Altro workshops of New York[3] (where now arrangements are being made for the permanent residence of the workers in flats adjoining the factory) differ fundamentally from those of the Reco workshops of New York,[4] where training of the substandard man was the only objective. Recognizing that the necessary conditions are unattainable in the outside world, no effort has been made at Papworth to train men for an occupation outside the settlement. On the contrary, all endeavours have been directed to providing permanent occupation for such men in the settlement at a full rate of pay.

In the village settlement, first and foremost, there must be the guarantee of a living wage. To provide suitable housing accommodation without providing the means to pay the rent goes but a very little way. To pay the man's rent destroys his self-respect, and, unless care is taken, the result will be a pauperized individual. Some means, therefore, of maintaining his earning capacity must be devised so that he may be able to pay his rent.

To enable the consumptive working man to maintain his earning capacity a whole set of conditions must be provided. Work, in the first place, must be such that his strength shall be equal to it—that is, it must be congenial; it may be the work of a craftsman (if the man's mental processes are equal to it) or it may be repetition work (if the man is of such a nature that he will not readily accept responsibility). But in either case it must not be playing at a trade. If there is one thing which a working man is able to detect quicker than another it is the sham industry or sham trade which has been set up by the amateur for his benefit. If his employer is playing at the game, so will he.

The next important consideration is the avoidance of all exploitation of his labour. It seems self-evident that a scheme for the employment and benefit of the tuberculous man should be for his benefit, and his only; this is by no means always understood or acted upon. There is no need to invoke a kind of feudal system in which all the best positions are taken by healthy overseers and the disabled left in the position of serfs. The true village settlement for the tuberculous will be one in which there is an opportunity for all to attain to a better position, just as it is possible in a modern well managed business concern.

A village settlement should be regarded as a self-contained community, its inhabitants being substandard men and women. They can compete with one another and are stimulated by such competition, but they must not be in the bondage of the healthy—those inhabitants of a foreign country, the outside world.

What the disabled man requires is the opportunity to put his talents to good use; the provision of that opportunity is our business. The provision of opportunity is quite a different thing from charity; charity paralyses effort. The provision of opportunity is rather the protection of the disabled from fierce and unequal competition than anything else. To introduce such competition into the village settlement in the form of a healthy overseer is to court disaster. This is hardly ever realized. The healthy overseer demands good pay, but he rarely earns it. Unless he is a man of exceptional character he looks upon the reduced working capacity of his men as a reason for reducing his own; he will come down to their standard rather than attempt to lift them up to his—which as a rule is dangerous or impossible. His salary becomes a drag on the industries. The overhead charges increase, and it is just these which the disabled man cannot meet out of his industry. He can earn his own wage, but little more. Herein lies the secret of the non-employment of any large number of disabled men in ordinary industry. A sympathetic employer can afford one or even two, but the point is quickly reached at which the subsidy required to keep these men equals the profits of the firm. A penny an hour lost on each of 300 men working eight hours a day reaches the astonishing figure of £2,800 a year. A donation of £50 or £100 a year to charity is an easy way of avoiding such a disaster.

The village settlement is the ideal scheme for the after-care of the tuberculous worker, whether man or woman. Sir George Newman, in his various reports,[5] emphasizes the point. There is a certain amount of agreement as to the ideal, and it remains therefore largely a matter of detail and of application.

It will be seen that the village settlement is gradually evolved from the sanatorium. To start a settlement *de novo* would not be attended with success. A village settlement grows as naturally as any village would grow when an industry which offers employment springs up. The difference between a village settlement and the ordinary village is that the industries are specially run for the benefit of the inhabitants of the village settlement, and no one else. The spirit of co-operation, once implanted, grows and increases; self-help and self-guidance follow. The institutional spirit is transformed into that spirit of self-reliance without which no community can stand.

The village settlement, with its hospital for advanced cases, the sanatorium for those suitable for this form of treatment, and the village, with its hostels and houses, workshops and recreation halls, forms a complete unit. The opportunity for medical research must not be lost sight of, and this aspect, combined with the opportunities for investigation into industrial and social conditions, makes the whole scheme an entirely new departure.

The Results.

1. A complete absence, during eleven years, of clinical tuberculosis in the 133 children of men and women who are definite clinical cases of the disease, and in most instances show tubercle bacilli in sputum from time to time.

2. A village community maintained by the work of the industries.

3. A total of £72,000 paid in wages to the settlers since 1918.

4. An aggregate of sales of goods produced by the settlers amounting to £177,543 during that time.

5. The arrest of the disease process to such an extent as to justify an expectation of life three times as long as that usually given in sanatorium statistics.

6. The removal of a number of chronic infective cases from the homes and workshops of the general community.

The question was once asked: What effective contribution can such permanent village settlements be said to make

towards the solution of the problem? It is true the question was asked some years ago. The answer is that the contribution is exactly what it was expected to be when the advice of the medical profession could be put into actual practice.

REFERENCES.

[1] Pattison, H. A., and Jacobs, P. P.: *Sheltered Employment for the Tuberculous in the United States*, Nat. Tub. Assoc., U.S.A.; New York, 1925; Technical Series, No. 7, p. 79. Medical Research Committee, Special Report No. 33, 1919: "Pulmonary Tuberculosis: Mortality after Sanatorium Treatment." Medical Research Council, Special Report No. 85, 1925: "An Enquiry into the After-Histories of Patients treated at the Brompton Hospital Sanatorium, Frimley, during the years 1905-1914."

[2] Annual Report, Chief Medical Officer, Ministry of Health, 1925, p. 121.

[3] Pattison, H. A., and Jacobs, P. P.: Loc. cit., p. 14.

[4] Idem, ibid., p. 37.

[5] Annual Reports of the Chief Medical Officer, Ministry of Health, 1924, 1925, and 1926.

INFARCTION OF THE HEART.

BY

R. O. ADAMSON, M.A., M.D.,

GLASGOW.

THIS important condition probably occurs more often than is realized. It may be concealed under the vague term of "heart failure" or "angina pectoris"; or, in total error, some entirely different condition may be supposed to be present. Life may continue for too brief a time for accurate opinion to be formed; and the unfortunate difficulties attending *post-mortem* investigation cause the waste of vast fields of clinical material.

It is, doubtless, a common cause of sudden cardiac death; also, if uraemia be excluded, of those fugitive attacks of pericarditis which occur in elderly people, who recover, but, later on, die suddenly. Such attacks may only exhibit a friction sound for a few days. Recovery from definite cardiac infarction occurs, after an illness of very definite kind, with symptoms practically pathognomonic.

It is caused by embolism of the right or left coronary arteries, but more often by thrombosis, the gradual increase of which may have given risen to symptoms of cardiac inefficiency. Infarction of the heart is always possible in the life history of these patients, whom we watch for years, with high blood pressure, diminished cardiac reserve, arterio-sclerosis and its symptoms in the brain, lungs, stomach, or kidneys, or in the limbs (intermittent claudication). When cardiac infarction occurs in these people death either takes place at once or in a few hours, or a more or less typical illness is presented, followed by recovery, partial or complete.

I do not know whether the symptoms are ever definite enough to distinguish between occlusion of the left and of the right coronary artery. When the left artery is involved definite symptoms are exhibited. But I have seen a small group of cases which seemed to be explained by sudden occlusion of the right coronary artery, thus chiefly implicating the right ventricle; but they lived so brief a time that, in the absence of *post-mortem* examination, the diagnosis is little better than a guess. The symptoms were a sudden attack of profound collapse, with livid pallor, very feeble pulse, and heart sounds regular or intermitting; retention of consciousness; absence of pain (no angina); vomiting in one case; and, above all, the extraordinary cyanosis, showing in the purple (yet pallid) cheeks, deeply coloured ears and lips and finger-nails, and livid mottling of large areas of skin, accompanied by respiratory distress, in one case taking the form of acute attacks of Cheyne-Stokes type of breathing.

Of left coronary occlusion the classical symptoms are sudden onset, with symptoms of anginal nature, imminence of death from heart failure, yet continuance of life with fever, prolonged pain, leucocytosis, remarkable fall in blood pressure, and pericarditis; these are followed by gradual recovery, and eventually good or impaired health.

A widow, aged 63, early in 1926 noticed that she became fatigued in a way unusual to her: she was not able to walk as fast as formerly, or to ascend hills with her former ease. In June, when on holiday, she was noticed to undertake much less than formerly. She had two attacks of giddiness and faintness, with substernal pain, coldness of limbs, slight degree of breathlessness and tightness in the chest, and her face was grey.

The actual illness began on July 2nd, 1926, with an attack of substernal pain, and ashy grey colour of the face. The following day there was an uneasy substernal feeling. The apex beat was 5½ inches from the middle line. The systolic pressure was 160 mm., the diastolic pressure 80 mm.

On July 4th, at 3 a.m., pain was felt in the chest, and at 6 a.m. became intense. I found her lying very still; the respirations were shallow and painful; the chest felt tightly gripped. The pain was at the xiphisternum, passing up to the neck and shoulders, through to the back. The pulse was regular, 58 to 60. Morphine, 1/6 grain, and inhalation of amyl nitrite gave no relief, so after fully an hour I again used amyl nitrite, with alarming results. She felt faint, and choked, and the pulse failed very badly, while pain spread down to the elbows. The pain became so extreme at the point of the xiphisternum that the abdomen was examined with special care, to exclude an acute abdominal condition. Further doses of morphine procured some relief.

The next day the patient was weak and in severe pain. The pain continued for about two weeks; it was situated xiphisternally, substernally, in the neck, precordium, shoulders, and in the back at the level of the third to eighth dorsal vertebrae. There was also a very troublesome pain on swallowing, referred to the centre of the chest. The pulse was very soft, at times alarmingly feeble and irregular. In the worst phases she was gravely collapsed.

In the early morning of July 16th she awakened with severe thoracico-abdominal pain, and fainted, and was quite pulseless for a time. By July 19th the pulse was 68 to 72 and usually regular; yet on July 23rd it varied from 42 to 54 and 58. The heart sounds at the worst were very feeble and irregular.

The blood pressure fell rapidly. Noted on July 3rd to be 160/80, it was on July 5th 110-105/65, on the 7th 80/50—the lowest recorded, this being a fall in the four days of 80 in the systolic pressure, and 30 in the diastolic pressure, and of the mean blood pressure a fall from 120 to 65. Thereafter the mean blood pressure rose to 75, 90, 110, and by November 9th was 130.

On July 6th, despite the general collapse, the temperature was 101.4° and a continuous elevation persisted till about July 20th, the highest record being 102.4°. The fever of the infarct lasted about two weeks.

The leucocytosis was not investigated. It is said to be a special and invariable feature of the condition.

Pericarditis was never detected by signs, but its presence, posteriorly, in relation to the oesophagus, was suspected to be the cause of the pain on swallowing. Pericarditis is a frequent and important symptom.

On August 3rd, and after, the condition was complicated by an extensive right-sided pleurisy, followed in a week by a similar occurrence on the left side. The condition of the lungs was fairly good; fine râles were occasionally heard over the left side and base.

Treatment.—Morphine was essential in doses of 1/6, 1/8, and 1/12 grain, hypodermically, and atropine was combined in suitable proportion. Strychnine was also used, but more frequently caffeine sodio-benzoate, grains 3½ hypodermically, or half that dose, in states of collapse. Of its usefulness I have no doubt. Glucose and saline enemata were useful when feeding was difficult. No hypnotics suited well: veronal, medinal, chlorobrom, bromides, and aspirin, and combinations, were all tried, with unusually little success. Morphine was the sheet-anchor. Amyl nitrite was useless, indeed dangerous, as from the later developments and behaviour of the circulation it was likely to be. There seems, therefore, to be an essential difference between the pain of cardiac infarction and that of a usual attack of angina pectoris—that is, in the mechanism of the pain, the state of the heart muscle and its arteries, and in the response to amyl nitrite.

General Remarks.

Clinical descriptions by practitioners do not seem frequent, though many cases must be met with. The latest reference is quoted in the *Medical Review* from an article by McKeen in the *Boston Medical and Surgical Journal*. He specially refers to the symptomatology, and to the differential diagnosis from ordinary angina pectoris; and also to the necessity of excluding, at first, acute gall-bladder disease, perforated stomach, acute pancreatitis, pneumonia, pleurisy, and the crisis of tabes. I found myself, at first, again and again excluding an acute subdiaphragmatic lesion.

ENCEPHALITIS LETHARGICA ASSOCIATED WITH PARKINSONISM TREATED BY ULTRA-VIOLET RAYS.

BY

HENRY N. JAFFÉ, M.B., B.S.,

PHYSICIAN-IN-CHARGE, NOTTINGHAM SUN-RAY CLINIC.

THE short paper by Dr. Fawcitt published early this year (BRITISH MEDICAL JOURNAL, 1927, vol. i, p. 422) induces me to place on record the following cases of encephalitis lethargica associated with Parkinsonism which have been under my care in the Nottingham Sun-Ray Clinic.

From January, 1926, to March, 1927, forty such cases were admitted and were treated with general body radiations without any local applications to the nasopharynx.

The entire body (back and front) has been exposed to radiations from a mercury vapour lamp (or preferably to the rays of three of these lamps used simultaneously) twice weekly for a period of six to seven weeks, the maximum exposure being ten minutes to both back and front of the body, at a distance of about 16 inches from the burner. This is followed by a rest for one month, and then the patient undergoes a second (and, if necessary, a third) course. I have aimed at producing a second or even a third degree erythema at each exposure; in other words, the radiations have been intensive rather than mild.

The majority of these cases were sent for treatment by their own doctors after other methods had yielded indifferent or negligible results, and in only 5 of them (12.5 per cent.) was there no appreciable improvement. In the remaining 35 cases (87½ per cent.) marked improvement resulted, as evidenced by increased co-ordination and steadiness of muscular control (both in grosser movements, such as walking, and in the finer movements of dressing, feeding, etc.), cessation or diminution of excessive salivation, disappearance of pain and insomnia, increased sense of mental vigour and physical well-being, and relaxation of the mask-like facial expression. In 2 cases out of the 5 apparent failures extended trials were given; the other 3 failed, for one reason or another, to continue treatment after the first three weeks.

The patients whose cases are recorded below are typical of the series treated.

Case 1.—An artisan, aged 22, had contracted the disease eighteen months before coming for treatment. This was a well marked case of post-encephalitic Parkinsonism, with marked hypertonus, tremors, sialorrhoea, and pain in his throat. After a first course of radiations he showed great improvement, feeling much better in his general condition, and using his hands easily. Thus he was able to feed and dress himself, but his throat was still troublesome. After a second course of radiations the general improvement could only be described as excellent; he was walking and talking well, his legs were much stronger, and his upper limbs were practically free from tremors.

Case 2.—A married woman, aged 47, had suffered from the disease for nearly two years. She was unable to feed or dress herself, and suffered from nerve pain and marked depression. Now, after ten exposures (five weeks), she is much brighter and stronger, is feeding herself, talking, eating, and walking well.

Case 3.—An artisan, aged 25. Parkinsonian syndrome well marked. Improved considerably from the very outset. Walked better after five exposures, and felt considerably stronger. After a second course he is now eating, sleeping, and talking well; feels his legs and body generally to be much stronger; has regained almost complete confidence in himself; has completely lost the characteristic facial expression, and is now back at his job, and working well.

Case 4.—A married woman, aged 32, had contracted the disease two and a half years before coming to the clinic. Her tremors, incoordination, dragging of the legs, excessive salivation, and helplessness were salient features in a characteristic condition. After fourteen exposures she was able to dress, feed, and help herself. She felt a peculiar degree of mental stimulation, and a definite sense of increased steadiness and strength for twenty-four hours after each radiation. She is now greatly improved.

Case 5.—A man, aged 44. Onset of disease four years ago. During the last two years he was getting definitely worse. Twelve radiations have so far been administered, and the patient is to-day brighter, happier, and stronger, his expression has softened, and his tremors have become subdued. He expresses himself as feeling "much stronger, and better altogether."

Case 6.—A man, aged 31, had typical Parkinsonian symptoms with distressing salivation, and paresis of right arm. Has improved from the first exposure, salivation is diminished, and he is now using the right arm and fingers with comparative ease.

Case 7.—A woman, aged 18, was treated for an acute attack of encephalitis lethargica in the General Hospital four years ago. She has so far only had eight exposures, but already shows increased strength, vast improvement in talking, and good general improvement.

Case 8.—A clerk, aged 28. This patient had treatment spread over several months. He can now dress, undress, and feed himself, his general improvement being remarkable. He is brighter, stronger, and more steady in every way.

Case 9.—A woman, aged 19. Two years' history of illness. Was much improved, stronger, and free from excessive salivation after a course of seventeen radiations. On cessation of the first course of treatment she became worse (possibly because she had had too many consecutive exposures), but after a lapse of one month she had a further twelve exposures, and showed marked improvement.

Case 10.—An artisan, aged 30, had contracted the disease three years before coming to see me. Tremors, salivation, and paresis have improved greatly after eight exposures in his second course.

DISSEMINATED SCLEROSIS: THE RAT AS A POSSIBLE CARRIER OF INFECTION.*

BY

ISABEL G. H. WILSON, M.D., D.P.M.,

PATHOLOGIST TO TAVISTOCK SQUARE CLINIC FOR FUNCTIONAL NERVOUS DISORDERS; CLINICAL ASSISTANT, PRINCE OF WALES'S GENERAL HOSPITAL, TOTTENHAM.

THE purpose of this article is, first, to set forth some new statistics on the occupational incidence, geographical distribution, and death rate of disseminated sclerosis, and secondly, to discuss these, with the occupational history of a series of clinical cases, in their bearing on the theory that the virus of the disease may be spread by the rat.

OCCUPATIONAL INCIDENCE.

Through the kindness of the Registrar-General I was able in 1926 to investigate the occupations of 688 persons who had died of disseminated sclerosis in 1925. The occupations were classified as far as possible, and then the actual number of deaths in a given occupation was compared with the expected deaths. By "expected deaths" I mean the number of deaths which would have occurred from disseminated sclerosis in those following a given occupation if the deaths had been evenly distributed among the population. For instance, if one-twentieth of the population are clerks, one-twentieth of the 345 male deaths from disseminated sclerosis should be among clerks. The matter is not so simple as it looks, but the advice of the expert staff of the Registrar-General on dealing with the figures has, I think, eliminated such error as is avoidable. The figures are as follows:

	Expected Deaths.	Actual Deaths.
Miners	19.17	20
Clerks	11.95	11
Farmers	7.46	16
Farm labourers	12.98	15
Railway workers	8.63	11
Carpenters	5.53	9
Painters and decorators	4.36	7
Gardeners	5.33	8
Plumbers	1.24	3
Moulders	1.94	3
Grinders	0.43	2
Window cleaners	0.39	2

The summary of the full statistics is as follows:

Farmers and farm labourers	33;	Relatives	23	
Gardeners	8	,,	8	
Labourers	37	,,	16	
Workers in chemicals and dyes	6	,,	2	
Domestic and nursing	27			
Cotton workers	25;	Relatives	12	
Wool workers	13	,,	4	
Boot and shoe makers	7	,,	10	
Carters, etc.	12	,,	8	
Timber workers	17	,,	12	
Painters	8	,,	7	
Building trade	8	,,	5	
Printers	9	,,	3	
Clerks and teachers	30			
Army pensioners	11			
Engineering and plumbing	19;	Relatives	13	
Railway workers	11	,,	9	
Ships and fishing	8	,,	11	
Iron and steel	22	,,	14	
Mining industry	26	,,	14	
Foodstuffs	22	,,	25	

The remainder may be classified as "Miscellaneous."

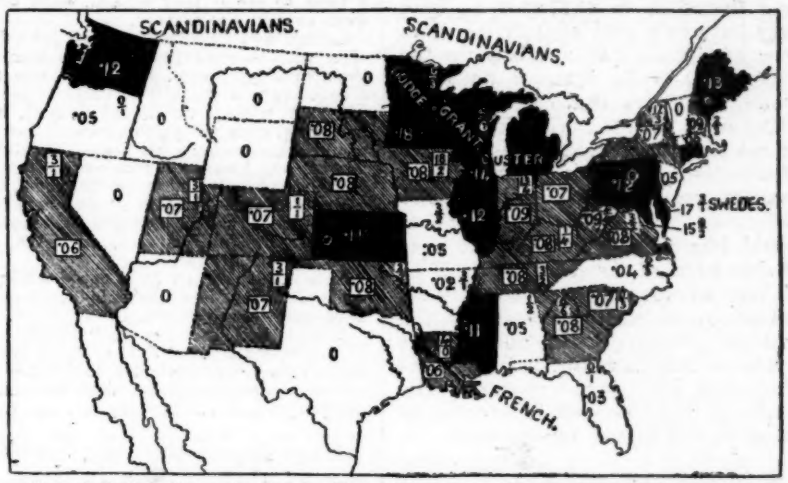
GEOGRAPHICAL.

The death rates were calculated for 1925 in the different counties of England and Wales. A greater range of years would have been much more valuable, but the labour involved was greater than I could then undertake. The death rate for the country as a whole was 17.5. This does not mean that the 1925 rate was lower than the death rate at all ages of 18.2 for the period 1921-25, but merely that the 1921-25 figures include diagnoses on certificates which were only presumed to be those of disseminated sclerosis—for example, "spinal sclerosis." Such doubtful diagnoses were eliminated from the 1925 figures considered separately; consequently the number of deaths is apparently smaller.

* Part of thesis accepted for degree of M.D. by Edinburgh University, October, 1926. A grant was given by the British Medical Association towards the expenses of this work.

The highest death rate for 1925 was in the Soke of Peterborough—103.3; then follow Merioneth 91, and Monmouth 83. Middlesex, Dorset, and Buckinghamshire were lowest, all having death rates of less than 9 per million.

There is reproduced by permission the map published in 1921 by the American Association for Research in Nervous and Mental Diseases, which shows the case incidence (not death rate) in America. It will be seen that the heaviest incidence is round the Great Lakes, beside the slow-flowing navigable portion of the Mississippi, and in one or two other areas.



Map of United States showing by States the varying density rate of multiple sclerosis. "Dodge," "Grant," and "Custer" in the Great Lakes region are the names of camps at which the drafted men from those localities were mobilized. From "Defects Found in Drafted Men" (*Arch. Neurol. and Psychiat.*). Reproduced by permission from *Multiple Sclerosis* (Association for Research in Nervous and Mental Diseases, Paul B. Hoeber, New York, 1921). The original map shows a table, which has been omitted here for the sake of clearness in reproduction.

DEATH RATES FOR DIFFERENT AGES.

Again by courtesy of the Registrar-General I was given the figures showing the death rates at different ages for the years 1921-25. Graphs of these show an interesting difference between the curve for males and that for females. It is of special interest to note that the death rate is much more like that of all illnesses taken together than would be expected from a disease thought to attack young persons, and believed to have an average duration of about eight years. Probably the explanation is that the illness lasts much longer than was formerly supposed. In the series of 72 cases recorded below, two patients had suffered from disseminated sclerosis for over twenty years.

THE RAT AS POSSIBLE CARRIER.

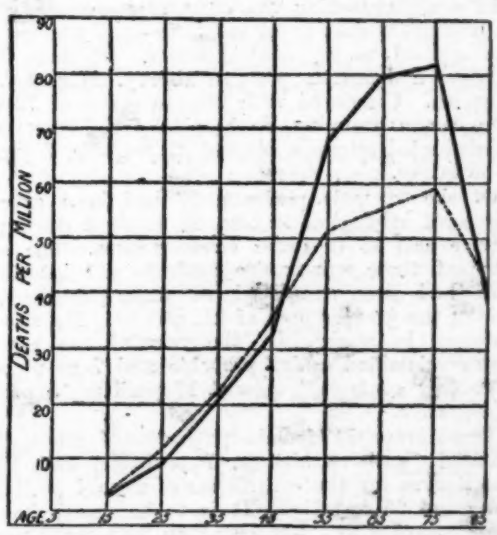
This possibility is put forward very tentatively. The following facts gave rise to it. The late Dr. J. W. Dawson,[1] to whose work so many owe inspiration, reported the case of a patient who developed disseminated sclerosis after falling into the deep end of fresh-water baths. Charcot[2] also mentions a case arising after the patient had fallen into water and allowed his clothes to dry on him. Manson-Bahr[3] wrote of a man who suffered from spirochaetosis icterohaemorrhagica after falling into the Thames. These things, coming to my notice one after the other, suggested a possible etiological resemblance between the two diseases.

Spirochaetosis icterohaemorrhagica is caused by a rat- and water-borne leptospira, which has probably two phases (as has also the spirochaete of syphilis[4] and that of relapsing fever), the infective phase developing in stagnant water. The spirochaete of disseminated sclerosis—which is mentioned in the descriptions of some sixteen sets of avowedly successful experiments to find or to transmit this organism—is described as "resembling closely the leptospira of Weil's disease."[5] Here are two pieces of circumstantial evidence.

The clinical similarity between disseminated sclerosis and known chronic spirochaetal infection has often been commented upon, and recently by Adams.[6] Adding to the spirochaete theory, it might be suggested that variations in the life cycle of the spirochaete are responsible for the small total incidence in the population (only one phase being infective) and for the failure of many investigators to find the organism (one stage being non-spirochaetal); that this organism is carried by rats, is excreted by them into water, and where the water is stagnant develops its infective phase; that the organism gains entrance to the patients by penetrating the mucous membranes of those who fall unexpectedly into infected water, or more commonly through the skin of the hands, arms, or feet of those who develop the disease as the result of occupational exposure; and that this entrance through the skin is facilitated by continuous dampness of the skin, and probably also by abrasions and dermatitis, occupational or other.

Going back to the former statistics, the incidence is heavy among farmers and farm labourers, and, as Adams[6] has pointed out, among those who work in byres and with cows. These statistical investigations of 1926 and the clinical experience of Adams coincide. With regard to the former I have remarked that "the damp of cowsheds and byres and barns, from the presence of rats and the neighbourhood of the farm water supply, is perhaps more likely to be infected than the damp of the open fields." Gardeners

Age.	Male Population.			Female Population.		
	No.	Deaths.	Rate per Million.	No.	Deaths.	Rate per Million.
0- 5	17,242,243	4	0.2	17,064,580	6	0.4
5-15	16,640,112	54	3.2	17,542,412	61	3.5
15-25	13,230,483	119	9.0	15,932,900	187	11.7
25-35	12,457,618	254	20.4	14,389,047	321	22.3
35-45	10,966,018	363	33.1	11,903,901	425	35.8
45-55	7,298,780	499	68.4	8,065,877	411	51.0
55-65	3,823,120	306	80.0	4,735,642	261	55.1
65-75	1,166,193	98	84.0	1,794,660	107	59.0
75-85	129,991	5	38.5	264,025	11	41.7
Total ...	91,840,048	1,702	18.5	100,349,806	1,792	17.9



Disseminated sclerosis: death rates per million at different ages (1921-25). In the chart, continuous line = males; dotted line = females.

have obvious sources of infection if the theory holds good; so also have plumbers, with their hands in water; moulders working with wet sand, often rat-infected; grinders who hold their tools under a drip of water from a can; window cleaners obviously; and painters from the washing of walls and roughening of hands from sandpapering, which is the occupation of the young decorator or the man working with a small firm. Clerks have only very slightly less than the "expected" number of deaths—perhaps because the semi-invalid takes to clerking, as he becomes unfit for harder work. Cotton and wool workers seem to have a heavy incidence (often they work with materials kept damp from a tank), but could not be further dealt with owing to difficulties of census classification. I am unable to explain the agreed heavy incidence on wood workers, on the basis of the present theory.

Geographically, I should like to suggest that the race inhabiting the Great Lakes area of America which is of importance in the etiology of disseminated sclerosis is not the human Scandinavian, as was suggested by the Americans, but the rodents *Rattus rattus* and *Rattus norvegicus*. If the spirochaete infests water, it is interesting to see that the Great Salt Lake is too strong for it. In England the fen district of Peterborough is infected, if any value can be attached to the figures of one year.

CLINICAL.

A series of 72 cases of disseminated sclerosis has been investigated with regard to the exposure of the patients to damp and wet in rat-infested areas. The classification made was as follows. "Positive," where there was definite history of working with hands or feet in water where the premises were known to be the resort of rats, or of sleeping in wet, rat-infested places; such were some bottle washers, and all the ex-service patients. "Probable," where there was continual damping of hands or feet, as in washerwomen and window cleaners, without evidence as to contamination of water by rats; or where the patient lived in damp, rat-infested quarters without special exposure to the wet. "Negative," where there were rats but no damp; damp, without special exposure thereto, and without rats; when the hands were in strong chemicals or disinfectants; and where neither rats, damp surroundings, nor wet occupation could be traced.

The history of damp and rats was considered over the four years preceding the onset of recognized symptoms—for the onset may be so insidious—and the same criterion was applied to the control series. Of these 72 patients 38 gave a definitely positive history, 14 probable, and 20 negative. Compared with these a series of 72 patients of similar age grouping, in hospital for diseases other than disseminated sclerosis, showed 21 positive, 7 probable, and 44 negative.

Of the 41 male patients, 27 had been exposed to all suggested etiological factors, 12 of them during their war service and 15 in other circumstances. The histories of some of those war-service patients are interesting. One man had been employed in water-pumping operations during the greater part of his service. He was constantly standing in water. Of the rest of the male patients 7 were classified under probable and 7 as negative. The 41 male "controls" showed 17 positive, 5 probable, and 19 negative.

There were 31 female patients, of whom 11 gave a definitely positive history, 7 probable, and 13 negative. The figures for the control series were 4 positive, 2 probable, and 25 negative. It is to be noted, however, that those recorded as "negative" in both series were engaged for the most part in domestic work, and were only negative in the sense that special exposure to the suggested factors was not proven. It is, I think, to be expected that the female patient would have less definite knowledge of the rat factor. She works with water which may easily be infected with spirochaetes unknown to her (see report of Sir Alexander Houston on London waters[7]). The man, on the other hand, works in a byre, or washes bottles or prints in a tank, and knows of the rats that run in the factory at night.

The histories of one or two of these patients may be quoted.

Mary worked in a vegetable kitchen, and constantly had wet feet from water on the defective flooring, where rats were seen at night.

Ann was a tin tester, and spent her days plunging tins into a tank to see if they leaked, with her arms in the tank. There were rats in the factory.

George and Phoebe had both been bottle washers in the cellars of a wine factory (where there were rats) when they developed their first symptoms, though he was a hatter's assistant and she a cork brander when they came under observation.

Arthur, a most intelligent patient, had worked on the wet sand moulding beds of a Government works, and told how the sand would even go down his neck if he stooped near some too vigorous digger, and how dead rats were sometimes found in the sand.

John had only one grumble about his share in a campaign on a dry frontier—that he fought in a river bed, and, coming now and then on water, would walk through and allow his socks and boots to dry on his feet, with the result that he had painful abrasions on his feet.

Nellie had worked in a cable works, her hands and arms in a tank of water, and her skin rough with "rubber rash." There were rats in the works.

Robert had had his first symptoms at 15; not long before he had spent a great deal of time learning to swim in fresh-water baths in a London suburb, the water to the baths coming from a reservoir which the boys used to visit regularly on Sundays, for the purpose of rat hunting.

Interesting as these are, however, I am fully aware that most of us have been in circumstances where we might be supposed to be exposed to infection—if infection it is—at some time or another, without developing disseminated sclerosis. Proof or disproof of the view put forward can come only from the bacteriologist. The rat and water theory of the etiology of disseminated sclerosis may end as a discarded theory, but it seems to me that there is enough suggestive circumstance in the bacteriology, geographical distribution, occupational incidence, and clinical findings to justify further work along these lines.

SUMMARY.

The occupations of 688 persons dying of disseminated sclerosis in 1925 have been investigated and the occupational death rate calculated where possible; the death rates for different counties of England and Wales have been worked out for that year; and the death rate for the years 1921-25 (corrected for age) is given. Clinically, 72 patients have been interviewed with regard to their exposure to rat-infested water.

CONCLUSIONS.

1. The findings of other workers as to heavy incidence in agricultural workers, wood workers, etc., have been confirmed. Incidence appears to be heavy also among painters, plumbers, moulders, and wool and cotton workers.
2. The high death rate in the fen district is analogous to the heavy incidence around the Great Lakes of America.
3. Clinical histories show some evidence in favour of the possibility that the infection of disseminated sclerosis is spread by rats and water.
4. No positive proof of the rat and water theory is yet available.

Finally I should like to say that I am grateful to the following, who have allowed me to see patients under their care: Dr. Browning Alexander, Dr. E. A. Bennet, Dr. Danvers Atkinson, Dr. H. N. Hardcastle, Dr. N. Hobhouse, Dr. E. D. Macnamara, Dr. J. G. Porter Phillips, Dr. C. P. Symonds, Dr. R. C. Turnbull, Dr. F. M. R. Walshe, Dr. Wiggins, Dr. Worster-Drought, and Dr. Yealland. I am also glad to express my indebtedness to the Registrar-General for allowing me to have access to the records, and to the authorities of Bethlem Royal Hospital, Guy's Hospital, and the West End Hospital for Nervous Diseases, for giving me facilities for work in their wards or out-patient departments.

REFERENCES.

1 Dawson, J. W.: The Histology of Disseminated Sclerosis. *Trans. Roy. Soc. Edin.*, 1916.
2 Charcot: *Diseases of the Nervous System*. New Sydenham Society, 1877.
3 Manson-Bahr: *Lancet*, November 18th, 1922.
4 Noguchi: *Journ. Exper. Med.*, xiv, p. 99.
5 Gye: *Brain*, 1921, xliv, 213-322.
6 Adams: BRITISH MEDICAL JOURNAL, July, 1926.
7 BRITISH MEDICAL JOURNAL, September 18th, 1926, p. 533.

A METHOD OF DRAINING THE SEPTIC UTERUS.

BY

A. REMINGTON HOBBS, M.D.,

MEDICAL SUPERINTENDENT OF ST. MARY ABBOTS HOSPITAL; CONSULTING GYNAECOLOGIST TO THE ROYAL BOROUGH OF KENSINGTON.

To those who are much engaged in the treatment of puerperal sepsis there is one form of treatment, at any rate, which is rapidly passing out of favour, and that is leaving the septic uterus to take care of itself. This opinion was definitely reached in this hospital when it was found that in over half the cases of puerperal sepsis admitted there was pent-up pus.

Since there still seems to be a diversity of opinion as to the best method of draining the uterus it is thought that a short account of that we have found most successful might be helpful to those engaged in the task.

The first point which always arises when we have to deal with pent-up secretions, naturally, from our surgical teaching, is the question of placing a drainage tube in the parts concerned. For some time a drainage tube was left in the uterus either as a continuous method or only for some hours. After considerable experience it became apparent that this was not the best form of treatment, as even after twelve hours the tube became offensive. It was thought that a tube left in the uterus acted as a sort of plug, or as a cork in a bottle, and retarded the flow of lymph from the tissues. In many cases it excited uterine contractions and caused pain, because the organ is always trying to expel foreign bodies. Such a procedure exhausts the uterine muscle, rendering it toneless, and doing away with the very function it is essential to retain. In some cases we were of opinion that leaving in a tube promoted haemorrhage rather than lessened it, and dammed back the secretions in the uterus.

In order to arrive at the best method of draining the uterus two things have to be borne in mind. In acute cases the oedematous tissues of the uterus have to be drained, and in chronic cases the secretions in the over-distended tortuous glands have to have an exit. Further, the cervical canal must be kept clear of all foreign bodies and retained products, such as pieces of placenta, membrane, and blood clot. The swollen cervical canal has to be reduced in size by a drug which diminishes the inflammation and so widens the canal.

In our experience the presence of a tube constantly in contact with the cervical canal does not obviously tend to reduce the swollen tissues. The whole art, therefore, of draining the tissues, as well as regaining the patency of the cervical canal and the contractile power of the uterus, is to use a suitable drug without leaving in a tube.

In choosing a drug the question has to be asked: Is there a method which can be applied again and again without being followed by an increase in the fever or disease, so that each application fulfils the purpose of an aid to the draining of the tissues which are in a state of stasis, which in no way injures the living cells of the tissues with which it comes in contact, which promotes a flow of lymph from the infected tissues—a method which, if properly applied, alleviates pain, relieves congestion, and by so doing stops secondary haemorrhage, mildly stimulates the uterine muscle to contract, and finally restores the function of the uterus? There is a method, and that method involves the use of glycerin (undiluted).

The Method.

The instruments required are: (1) a catheter introducer; (2) terminal-eyed soft rubber catheters; (3) an anterior vaginal wall retractor; (4) a modification of Sims's speculum; (5) 2 c.cm. and 10 c.cm. Record syringes.

No anaesthetic, general or local, is necessary. The patient is placed in the lithotomy position. The external parts are washed with ether soap and water, and then with saline. The vagina is treated in the same way. A Sims's speculum is introduced into the posterior fornix, and an anterior vaginal wall retractor into the anterior vaginal fornix, and by a series of gentle movements the cervix is manipulated into a central position. The speculum must not be pushed too far back, and the anterior vaginal wall retractor must be held horizontally and obliquely in the same plane. By this means a good view is obtained of the cervix, which becomes readily accessible for the purpose of passing a catheter. A terminal-eyed catheter is lubricated with glycerin, and gently inserted into the os, syringing the glycerin in front of the catheter so as to make a bed for its easy upward progress through the cervical canal to the fundus of the uterus. The syringing is still continued as the catheter is withdrawn. This is repeated if the uterus contains much pus.

Modifications of Treatment for the Type of Uterus.

After Labour or Miscarriage.—The patients here are relatively insensitive, and the best time for treatment is certainly during the first few weeks following labour or abortion, and quicker results are obtained.

Cases Following Labour.—In these cases we have certainly found the undermentioned method the best in all our experience. Patients are prepared in the usual way, but after the insertion of the catheter into the uterus the anterior vaginal wall retractor and Sims's speculum are removed, leaving the catheter *in situ*. The legs are then lowered on to the table, and the syringe, with the catheter still fixed on the end, is placed on a sterile pad on the symphysis pubis. A pillow is placed under the knees to add to the patient's comfort. The assistant, standing by the side of the patient, injects the glycerin slowly through the catheter, giving a slow irrigation treatment to the uterus. This may be continued for from twenty minutes to half an hour. In that time 60 to 100 c.cm., or even more, glycerin may be injected without causing the slightest discomfort to the patient. This may be done twice a day. Undoubtedly a more thorough washing of the uterus is obtained, and in many cases after one or two irrigations the temperature has fallen by crisis, whereas the short intermittent remedy which is used in the majority of cases has had no effect on the temperature.

Chronic Cases.—Many patients received into the gynaecological wards have suffered from intermittent attacks of temperature, recurrent attacks of pelvic peritonitis, and, which have been so distressing to the patient, prolonged uterine haemorrhages. Many of our recent cases have been dealt with very successfully in the following way. Small quantities of glycerin have been injected into the uterus daily until the temperature has come down, and if there is still much discharge and erosion which is not cleared up the uterus is washed out occasionally with industrial methylated spirit under morphine gr. 1/4. In cases of chronic haemorrhage, as in chronic metritis and fibrosis uteri, patients are given an anaesthetic and the uterus is washed out alternately with methylated spirit and glycerin. This is repeated for about a dozen times. Subsequently in all cases the uterus is drained for the succeeding few days.

By these treatments many cases which have seemed quite hopeless have cleared up.

I wish to thank Dr. Mary R. Levack for her help in carrying out the treatments.

CONGENITAL DEXTROCARDIA WITHOUT TRANSPOSITION OF OTHER VISCERA:

Acquired Valvular Disease and Auricular Fibrillation.

BY

DAVID KRESTIN, M.D., M.R.C.P.Lond.,

MEDICAL FIRST ASSISTANT, LONDON HOSPITAL.

Complete transposition of the viscera, *situs inversus totalis*, is too well known as a clinical condition to merit any special description. The following case, however, presents several features of unusual interest.

Description of Case.

The patient, a female, aged 30, first came under the care of Dr. Theodore Thompson in October, 1926.

History.—For ten years she has had a troublesome cough, shortness of breath on exertion, and attacks of palpitation

and faintness. There has been occasional pain across the right side of the chest in front, particularly after exertion. She has never had swelling of the feet or haemoptysis. There was no history of rheumatic fever, chorea, or of other serious illnesses in childhood. As a child her heart was found to be on the right side.

The patient was a pale, ill nourished, and underdeveloped woman. The lips were slightly cyanosed. The fingers were not clubbed. The pulse was small, completely irregular both in time and force, with a rate of 90 per minute. She was taking digitalis at the time of examination. The systolic blood pressure (brachial) was approximately 120 mm. of mercury.

On examining the chest, cardiac pulsation was observed to the right of the sternum, and the apex beat was felt in the fifth space, four inches to the right of the mid-sternal line. The cardiac dullness was found to the right of the sternum, the right border extending out to the apex beat.

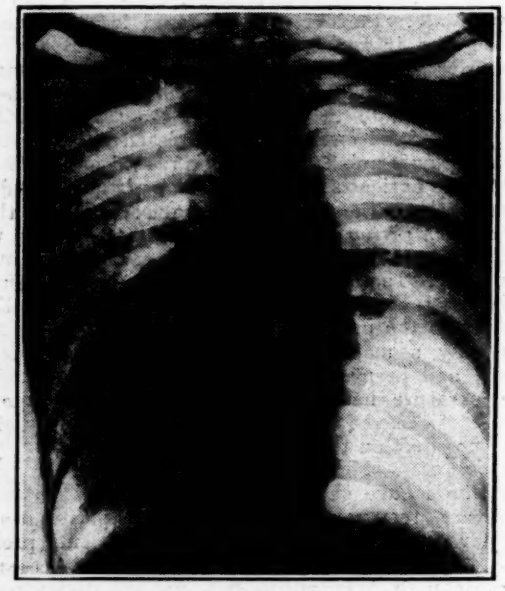


FIG. 1.—Radiogram showing heart shadow in the right side of the chest, and the aortic "knuckle" to the right of the mid-line.

No thrills were felt on palpation. On auscultation the heart sounds were irregular, and over the apex beat both systolic and diastolic murmurs were heard. The second pulmonary sound was accentuated. The breath sounds over both bases were diminished, and accompanied by rhonchi and crepitations. The hepatic dullness was present in the normal situation, and the lower edge of the liver could just be felt beneath the right costal margin during deep inspiration. The urine was normal. The Wassermann reaction in the blood was negative.

The patient was radiographed by Dr. M. H. Jupe, to whom I am indebted for the following report (Fig. 1):

"The heart shadow lies in the right side of the chest, with a small area projecting to the left of the spine. The aortic 'knuckle' appears to occupy a position to the right of the mediastinum. The heart is more globular in shape than usual, and its right margin is distinctly convex in outline. Although the peribronchial shadows are more obvious than usual, gross abnormality of the lungs or pleura is absent. The hepatic shadow is seen on the right side. A barium meal was given and the patient screened, when the stomach was found to occupy a normal position. The case appears to be one of dextrocardia accompanied by transposition of the great vessels. The other viscera occupy a normal position."

The electro-cardiogram (Fig. 2) is grossly abnormal. The abnormality of waves in Lead 1 makes it difficult to be certain of their direction; on the whole they do not appear inverted; P waves are absent in all leads, and the ventricular complexes, many of which are ectopic, are quite irregular.

Diagnosis.

There can be little doubt as to the diagnosis in this case. The patient has congenital dextrocardia with normal position of other viscera, and this is associated with a valvular lesion, probably mitral stenosis due to old rheumatic endocarditis. The case is complicated by auricular fibrillation.

Comments.

Congenital dextrocardia without transposition of other organs is comparatively rare. In 1921 Laubry and Pezzi[5] collected from the literature twenty-nine cases of this condition in which the diagnosis was certain, whereas they were able to collect 227 cases of total transposition of viscera.

The appearance of the aortic "knuckle" to the right of the mid-line in the radiogram is unusual in this type of case. According to Laubry and Pezzi the cardiac chambers are not actually reversed in congenital dextrocardia without total *situs inversus*. They hold that the condition is due to a "pulling over" of the heart without rotation, and thus the relative position of the great vessels shows little departure from the normal. For this reason the curves in Lead 1 of the electro-cardiogram are usually not inverted as in complete transposition of viscera. Several cases of undisputed diagnosis have, however, been described, in which the cardiac cavities were actually reversed and Lead 1 of the electro-cardiogram inverted (Moffett and Neuhof,[7] Gorter,[3] Meyer,[6] Capon and Chamberlain[1]). That the functional left heart is on the right side in this case is further suggested by the fact that abnormal murmurs, presumably mitral in origin, are heard over the apex beat

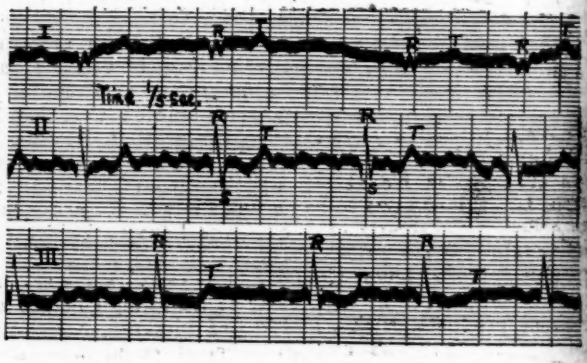


FIG. 2.—Electro-cardiogram showing auricular fibrillation (absence of P waves), and gross abnormality of ventricular complexes in Lead 1.

in the fifth right space, and by the shape of the right border of the cardiac shadow in the radiogram (Fig. 1). In the electro-cardiogram (Fig. 2) here described, one cannot be certain of the direction of the waves in Lead 1, as they are so abnormal. It would certainly be unusual to find the waves in Lead 1 normal in direction in a case where the cardiac chambers are actually reversed. A case of congenital dextrocardia without transposition of other viscera, however, was described by Gautier and Coeytaux[4] in which radioscopically the cardiac cavities and great vessels appeared reversed, but in which the electro-cardiogram was normal. The diagnosis in this case was not confirmed anatomically.

The coexistence of acquired valvular disease and congenital dextrocardia is by no means unknown. So far as I am aware, mitral stenosis associated with congenital transposition was first described by Owen[8] in 1911. Other cases complicated by valvular disease have since been described; indeed, an individual with congenital dextrocardia would appear to be as much liable to rheumatic disease as any other.

Curiously enough, abnormalities of cardiac rhythm are apparently very rare in this condition, but there are as yet too few electro-cardiographic records of these cases to justify any definite statement. That interference with the conducting mechanism may occur is illustrated by such records as those published by Parsons-Smith[10] and Potts and Ashman.[11] Auricular fibrillation complicating dextrocardia, as in the case here described, however, must be extremely rare; I could find no reference in the literature to a similar case. Laubry and Pezzi[5] state that they have never seen auricular fibrillation occur in any case of

congenital heart disease, and this was also the experience of Parkinson and Clark-Kennedy[9] in 1926.

I am indebted to Dr. Theodore Thompson for kindly allowing me to publish this case, and to Dr. John Parkinson for the electro-cardiographic record.

REFERENCES.

1 Capon, N. B., and Chamberlain, E. N.: *Lancet*, 1925, i, 918.
2 Gautier, P., and Coeytaux, P.: *Rev. Franç. de Pédiatrie*, 1926, ii, 3, 356.
3 Gorter, E.: *Acta Pediatrica*, 1925, iv, 2, 128.
4 Laubry, Ch., and Pezzi, C.: *Traité des Maladies Congénitales du Cœur*, Paris, 1921, 279-285.
5 Idem, ibid., 309.
6 Meyer, P.: *Arch. des. Mal. du Cœur*, 1923, xvi, 249-255.
7 Moffett, R. D., and Neuhof, S., *Amer Journ. Dis. Child.*, 1915, xp 1.
8 Owen, S.: *Heart*, 1911, iii, 1 113.
9 Parkinson, J., and Clark-Kennedy, A. E.: *Quart. Journ. Med.*, 1926, xix, 75, 144.
10 Parsons-Smith, B. T.: *Proc. Roy. Soc. Med.*, Clinical Section, 1927, xx, 59.
11 Potts, R H., and Ashman, R.: *Amer. Heart Journ.*, 1926, ii, 2, 152.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

UNUSUALLY LARGE OVARIAN CYST.

IN view of the rarity now of extreme abdominal enlargement due to an ovarian cyst, the following details and illustration of such a case may be of general interest.

A woman, aged 57, was admitted to hospital as a case of acute intestinal obstruction; there had been no movement of the bowels for three days. She complained of generalized pain over the abdomen and in both legs, which had lasted only a fortnight. There was no urinary trouble. The menopause had occurred seventeen years previously; menstruation had always been normal. The abdomen had been increasing in size for about twenty years; she had consulted a medical practitioner twelve years prior to admission, but he had refused to operate.

The abdomen was enormously distended, with large veins coursing over it; the swelling gave a remarkably distinct fluid thrill, but the flanks were clear, so ascites was excluded. An ovarian cyst was diagnosed. Both legs were purple up to the knees and cold to the touch; there was dry gangrene of the toes of both feet. The patient said that she had not been able to go to bed for more than six months; she spent the time sitting in a chair. Under a local anaesthetic I cut down to the peritoneum, and then passed a few stitches through it and the wall of the cyst. A trocar and cannula were thrust into the cyst and a No. 3 catheter was inserted. The patient was drained very slowly for two days, and then a larger catheter was introduced. At the end of four days her legs down to the toes resumed their normal colour and became much warmer; the pain which had been present ceased. The patient could then be put to bed. The fluid which came away was of a dark colour; each measurement of it was checked by two senior nurses. At the end of a week 108 pints 12 ounces had been removed. Some little fluid was still retained, but the patient was getting weaker, so that the catheter was withdrawn. She died a fortnight after admission. At the necropsy an enormous ovarian cyst was disclosed; there was no free fluid in the abdomen. The liver was almost unrecognizable; in shape it resembled a crescent.

For leave to publish this case my thanks are due to Mr. A. G. Bate, surgeon to the Royal Sussex County Hospital.

H. H. BARNETT, M.B., Ch.B.

TRAUMATIC RUPTURE OF THE DUODENUM AND LIVER; SUBPHRENIC ABSCESS: RECOVERY.

THE following case is placed on record on account of the rarity of recovery after such an accident, and, indeed, of the condition itself.

W. A., aged 30, when riding a motor cycle at night, crashed into a motor lorry. He was admitted to Mr. A. B. Mitchell's wards in the Royal Victoria Hospital, Belfast, on August 25th, 1927. When I saw him, some five hours after the accident, he was suffering from shock and writhing with abdominal pain. The abdomen was rigid and tender, especially to the right of the middle line, about the tip of the tenth rib; it was somewhat tympanitic and distended.

I opened the abdomen by a right paramedian incision and found a large amount of blood coming from an extensive tear in the under surface of the liver; after mopping out the blood intestinal contents were seen welling up from the duodenal region; I found a ragged tear far back on the anterior surface of the first part, almost at the angle of junction with the second. I sutured this with some difficulty, as the patient was very stout. The hole was the size of a threepenny bit, and was more or less circular, but there was no induration, thickening, or any evidence of ulceration.

I then made a rapid survey of the small intestine to exclude other perforations; it revealed numerous bruises, but no tear. His condition did not permit of further interference, so I closed the wound, leaving a pack down to the ruptured liver to control bleeding, and a drain.

He caused some anxiety for a few days and developed a moderate degree of wound sepsis, but had no vomiting. By September 4th the temperature was normal, and remained so until September 10th, when it began to rise at night; this continued until October 5th, and he was complaining of left-sided pain when I then saw him. I explored the left subphrenic region, and found pus. Next day Mr. Mitchell helped me to open a very large subphrenic abscess after subperiosteal resection of the twelfth rib. The patient then made steady progress towards recovery, although his pulse rate was 120 for a long time. He left hospital in good health, except for a ventral hernia, on November 12th. He had no gastric symptoms, either before or after the accident.

Berry and Giuseppi record 23 cases in the ten principal London hospitals prior to 1907; all the patients died. Choyce states that only 5 such patients were admitted to the London Hospital from 1899 to 1919, and all died. Rowlands (BRITISH MEDICAL JOURNAL, 1923, i, 716) records 23 cases of ruptured duodenum out of 381 of ruptured intestines, but does not give separate mortality.

Belfast. C. J. A. WOODSIDE, M.B., F.R.C.S.I.

GANGRENOUS APPENDIX IN A STRANGULATED HERNIAL SAC.

THE following case of strangulated inguinal hernia seems sufficiently rare to merit description.

An infant, aged 6 weeks, was admitted to Booth Hall Infirmary on September 15th, 1927; the mother stated that she had noticed a swelling in the right groin the day before, which was tender and increased in size. The child was fretful, but had not vomited. The bowels had been opened the day before.

On admission the temperature was 97°, and the pulse rate was 140. The right side of the scrotum was swollen, tense, and discoloured, and the cord on the same side was thickened. The mass was irreducible.

At operation a distended sac was found, strangulated by a tight external ring. Inside the sac was the appendix, which was completely gangrenous, together with the lower pole of the caecum, which was engorged and discoloured, but still viable. The lumen of the caecum and the ileo-caecal junction were outside the sac, a fact which probably accounted for the absence of vomiting. The appendix was removed, and the sac ligatured.

The child recovered well after operation, but unfortunately died eleven days later from enteritis.

AGNES SEASTON, M.B., Ch.B.

Booth Hall Infirmary, Manchester.

CONGENITAL DIAPHRAGMATIC HERNIA.

IT may perhaps be worth while to add this to the long list of such cases on record.

On November 8th I was called to see a newborn infant. The nurse informed me that when the head was delivered she noticed the face to be intensely blue, and she completed delivery at once. The apex beat was on the right side. She tried artificial respiration for some time, and as there appeared to be no sign of improvement she sent for me.

When I arrived the infant had been born about thirty minutes. The face was almost blue-black, the abdomen was distended and tense, and the apex beat was at the right nipple; the rate was about 30, and every fifteen seconds or so the infant took a short jerky inspiration. It lived about fifteen minutes after my arrival.

At the *post-mortem* examination the heart was seen to occupy the right side; the right lung lay above it and was very slightly inflated; the left lung was infinitesimal, and the left side of the thorax was packed with coils of intestine. The liver was swollen and congested, and occupied practically the whole abdominal cavity. The hernial opening was in the left posterior quadrant and its edge was quite smooth.

I took the specimen to Dr. Cavendish Fletcher, who was good enough to make the following report:

"The posterior part of the left side of the diaphragm had failed to develop, leaving a hole about three-quarters of an inch in diameter. The posterior side of the hole was bound by the posterior abdominal wall, and the anterior and lateral aspects by a sort of falciform edge quite smooth and evidently not due

to trauma. The stomach was in its normal position, and the perforation of the diaphragm by the oesophagus was normal. The liver was large and weighed 7 oz. It was congested. The extreme tip of the left lobe was turned up into the thorax through the diaphragmatic perforation referred to, a marked indentation of this lobe indicating the position of the edge of the hole in the diaphragm. The whole of the small gut and the ascending and transverse colons occupied the left side of the thorax. The spleen, too, was found in the thorax, lying in the middle line, just in front of the tiny undeveloped left lung. The latter weighed only 4 grams, having failed to develop beyond this size owing, no doubt, to the pressure of the displaced viscera. The right lung was normal, but unexpanded. It weighed three-quarters of an ounce. The heart was completely displaced to the right side, but was otherwise normal. Apart from the hernia, and the failure of the left lung to develop, no visceral disease was found."

Assuming the condition had been diagnosed *ante mortem*, it would be interesting to know what chances of life the child would have had if the hernia had been reduced by open operation.

Hayes, Middlesex. D. H. WALDRON, M.B., B.Ch.

CHRONIC VINEGAR POISONING.

THE following case seems worthy of note, on account of the paucity of recorded cases where commercial vinegar has been consumed over a considerable number of years in much the same quantity as the other more refreshing beverages which are indulged in by the world at large.

In August, 1927, I was called to see a woman aged 60. She was in bed, looked ill, but was mentally bright and alert. Beside her stood a quart bottle of vinegar three parts empty. This quantity she acknowledged she had consumed during the same day. I learned from her relatives that this was about her usual daily ration; that, in fact, she never ate anything without washing it down with a liberal quantity of the liquid. This had been her habit for as many as thirty years. At one time she had weighed 112 lb.; now her weight was 38 lb. Till a week before she had been up and about the house, but during the last five weeks she had taken no food; nevertheless she had not decreased her daily quantity of vinegar. Her temperature was subnormal; her hands and forearms and her feet and legs were almost black. She had no pulsation in the arteries below the elbow and knee. The apex beat was easily palpable in about its normal position, and the heart sounds were clear. She was most emaciated, but no signs of malignant disease consistent with such an advanced state of emaciation could be discovered. She had some difficulty in swallowing, but this appeared to be due to general weakness. The urine was acid, but contained no abnormal constituents.

She was admitted to the Royal Salop Infirmary, but could retain nothing by mouth or by rectum, and died within forty-eight hours.

An inquest was held, and the verdict that death was due to a chronic intoxication (the intoxicant being commercial vinegar) was concurred in by the coroner (Dr. Cureton), the resident physician (Dr. Evans), and myself. For the following notes on the *post-mortem* examination I am indebted to Dr. Evans of the Royal Salop Infirmary.

Deceased is a most emaciated woman, there being an almost complete absence of naked-eye fat. The tongue shows a chronic superficial glossitis, and the pharynx a chronic pharyngitis. The oesophagus is normal. The stomach is dilated, its mucous membrane very white, smooth, and non-rugose, and contains clear fluid. There is some intestinal catarrh. The kidneys are small and pale, but their pattern is clear. The heart is small and shows well marked tabby-cat striation beneath the endocardium. The valves are all competent. The lungs show atrophic emphysema and some chronic bronchial catarrh. The spleen is small and atrophic. The liver is of the well marked nutmeg type, and shows some old perihepatitis. The gall bladder is distended and full of dark, viscid bile.

To me it appears remarkable that the woman lived so long. The state of acidosis was evidently prevented by the formation of acetic salts, which were in turn broken down, but the condition of her digestive organs gradually became worse till they reached a state of complete abrogation of function. She was, in fact, as nearly as possible pickled alive.

Shrewsbury. D. A. URQUHART.

Reports of Societies.

EXTENSIVE AORTIC ANEURYSM.

AT a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland on December 9th, the President, Dr. T. T. O'FARRELL, in the chair, Dr. A. R. J. DUNGAN read notes on a case of aneurysm of the aorta, and showed a specimen.

Dr. Dungan said that the entire thoracic aorta was moderately dilated, and beyond the transverse portion of the arch was filled with a mass of laminated clot, leaving only a small lumen. There was advanced atheroma, but no macroscopical signs of syphilis. Microscopically, however, there was found infiltration of the media and adventitia by mononuclear cells, and there were patches of scar tissue in the media. The Wassermann test was strongly positive.

The PRESIDENT said that aneurysms of the aorta were rarely seen, since these cases were not usually admitted into general hospitals. The symptoms were sometimes not very clear. Dr. J. LAIT said that he had never met a case in which there had not been a positive Wassermann reaction.

Sir WILLIAM WHEELER said that he had operated upon three cases of aortic aneurysm; one man was alive and well seventeen years later. At the time of operation the aneurysm was thin-walled, and appeared likely to burst when the abdomen was opened. The introduction of wire had produced in this case a complete cure. In a second case a necropsy had been performed some four years after the introduction of wire. In this case the aneurysmal sac was also completely consolidated, but the man died from rupture of a secondary dilatation. The third patient died shortly after the operation. Dr. W. D. O'KELLY said that he had never seen such an extensive aneurysm; the patient must have suffered from acute syphilitic aortitis.

Sir JOHN MOORE referred to a description of aneurysm of the aorta which stated that aneurysms of the ascending aorta provided physical signs, while aneurysms of the descending aorta were indicated by symptoms. He feared that at present there was a tendency to attach too great confidence to diagnoses made by *x*-ray examinations. Dr. H. B. GOULDING mentioned the case of a woman who had died suddenly while carrying a bucket of coal upstairs. She had complained of persistent cough and pain in the chest. Dr. Goulding found an aneurysm adherent to the sternum; it had apparently burst into the pericardial cavity. Dr. A. R. PARSONS discussed the auscultatory signs in intrathoracic aneurysm, and thought that there were quite a number of these cases in which there was no murmur present.

Dr. Dungan, replying, said that in the Johns Hopkins Hospital there had never, he believed, been a case in which it had not been possible to disclose a syphilitic lesion microscopically. In the present case no murmur had been present.

Malignant Papilloma of Kidney.

Dr. T. T. O'FARRELL showed a malignant papilloma of the pelvis of the kidney of a man aged 54. Three months previously the patient had felt a stabbing pain in the left side; he had never passed blood, but the urine had twice been coloured red. On admission pain was present at the lower border of the ribs at the back, and was much aggravated by coughing. A swelling was felt in the left lumbar region and projected into the left iliac fossa; it moved with respiration and was dull on percussion, except for a band of resonance which crossed it. The left kidney, which was removed, measured 15 by 9 by 7 cm.; it was irregularly lobulated and one surface showed many adhesions. It was almost completely cystic, due to back pressure. The whole pelvis was occupied by a papillomatous mass, not unlike a villous papilloma of the bladder, which appeared to have its origin at the attachment of the pelvis to the kidney proper, though the growth extended to a certain extent into the cystic spaces. Microscopically the tumour was composed of stalks of fibrous tissue covered by several layers of transitional epithelium. Mitotic figures were fairly numerous, and though no definite infiltration of

tissues could be seen the evidence of rapid growth suggested the probability of malignancy.

Differential Diagnosis of Uterine Tumours.

Dr. D. G. MADILL showed a uterine tumour removed from an unmarried woman aged 76. Following slight but persistent vaginal discharge, she had had a severe haemorrhage. Dr. Madill found the vagina filled with a clot, and there was a small papilloma protruding from the cervix, which was very big and felt sore. Dr. Madill thought that it was probably a case of adenocarcinoma, and in the course of a few days performed complete hysterectomy. The patient did well.

Dr. J. T. WIGHAM said that the tumour was a particularly uncommon one; the cervix was larger than the body of the uterus. Such tumours nearly always involved the body of the uterus, and not the cervix. The present growth had probably started in the body, and then extended to the cervix; it was an adenopapilloma of "cauliflower" growth. It was always recognized that these tumours were either actually or potentially malignant; somewhere in them there was a very definite infiltration of the muscular wall of the uterus, but in this case he had been unable to find this, though there was papillomatosis of the mucous membrane of half the body and the whole of the cervix. Dr. Wigham thought that it was benign in origin, but was tending to become malignant. It was always a debatable point whether these tumours began as cancer and developed papillomatous growths, or began as papillomas and became malignant. He did not think that the growth in these cases extended any further into the wall of the uterus than the glands of the normal endometrium.

Dr. R. J. ROWLETTE suggested that this tumour might be endocervical in origin, and arise from the mucous glands. He said that malignant disease was very seldom seen in so old a patient.

Dr. J. LAIT said that when he had first seen the specimen in the laboratory he had considered it malignant, but when he had prepared section he had realized that it was apparently benign. He had not met with this condition before except in the examination of curettings. These tumours originated often from the endometrium of the body of the uterus, and rarely from the mucous membrane of the cervix. Inasmuch as they resembled the villous papilloma of the bladder, both in structure and from their tendency to malignancy, he thought that the term villous tumour of the endometrium suggested by Sir John Bland-Sutton was most appropriate. He was not convinced that there was no infiltration of the uterine wall, and agreed that hysterectomy in this particular case was the ideal treatment.

The PRESIDENT thought it very difficult to say whether cancers grew from the tubules in the cervix when the tumour was superficial; it would have been difficult to find infiltration in this case, since the uterus was very old and fibrotic. He asked if any mitoses had been found.

Dr. MADILL, replying, said he had had no doubt from the clinical symptoms that this patient had malignant disease, and that it was essential to do a complete hysterectomy.

Dr. WIGHAM, replying, said that there were no mitoses, and that his reason for concluding that this was a tumour of the body rather than of the cervix was that papillomatous tumours of the body were much more commonly met with than tumours of the cervix.

Various Exhibits.

Mr. W. PEARSON read notes on a case of hydronephrosis, and Dr. J. T. WIGHAM showed the specimen. The patient, a woman, aged 43, underwent curetting three years previously and a laparotomy for uterine and pelvic trouble. The right ovary and tube were removed and a suspension operation performed. At that time it was noted that the uterus was enlarged and adherent to the rectum, and there were also adhesions in the right adnexal region. Two and a half years later she began to suffer from flatulence and pain in the upper abdomen, which spread to the right loin and sometimes into the back. At times, when the pain was severe, vomiting occurred, and was followed by relief. There were no urinary symptoms, and the urine was normal. Examination revealed a firm, rounded, somewhat tender tumour, the size of a tangerine orange, in the right epigastrium just above the umbilicus, and a second swelling was felt which was evidently an enlarged kidney. The bladder and ureteral orifices were normal. Urine was coming from each, but in considerably less amount from the right ureter. A hydronephrotic kidney with a tensely distended pelvis and an enormously dilated and tortuous ureter was removed. The symptoms, which were entirely dyspeptic and suggestive of duodenal trouble, were evidently due to duodenal distortion or kinking produced by the greatly distended renal pelvis. There seemed little doubt that the pelvic portion of the ureter became involved in scar tissue subsequent to the gynaecological operation, with resulting chronic partial obstruction to urinary flow.

Dr. J. A. MCGRATH read notes on cases of four tumours of the neck, and exhibited specimens. The first was an alveolar sarcoma of the parotid. It consisted of malignant spheroidal cells irregularly divided off into islands by fine bands of fibrous tissue. The islands varied in size, and the specimen bore a close resemblance to a mixed scirrhous and encephaloid carcinoma of the breast.

The second exhibit, a primary sarcoma of a lymph gland in the neck, was from a man, aged 52, who had had a lump on the side of the neck for about twenty years; it slowly grew in size, was egg-shaped, slightly movable, and not adherent to skin, though the adjacent glands were slightly enlarged. The specimen consisted of a somewhat ragged piece of tissue, not unlike a mass of lymphatic glands with considerable fibrous tissue, and some golden-coloured pigment. There was also a separate piece of tissue, resembling a lymphatic gland, solid in consistency, and of pale colour. On section it was found to be composed of malignant spheroidal cells; in places collected into masses, but elsewhere surrounded by fibrous tissue. Mitotic figures were very numerous. There was a very small amount of lymphoid tissue present, probably the remains of the original lymphatic gland, but no tendency to the formation of acini was evident. There were patches of necrosis in some sections, but no similarity to endothelioma.

The third exhibit was a secondary carcinoma of a lymph gland in the axilla, the secondary growth being larger than the primary, and the last a carcinoma from the anterior triangle of the neck.

Dr. J. LAIT read notes on a case of carcinoma of the stomach, and showed specimens. *X*-ray examination showed a dilated oesophagus, the barium being longer retained than normally and passing very slowly into the stomach. There was constriction of the oesophagus near the cardiac end of the stomach, with a large filling defect of the lesser curvature and an irregularity extending upwards to the cardiac orifice. The patient could take nothing except liquid foods, and eventually died apparently from exhaustion. The entire stomach except the pylorus and about 2 in. of the stomach adjacent to the pylorus was found to be occupied by an ulcerating, fungating, and in many places necrotic tumour, which surrounded the cardiac orifice, causing incomplete obstruction. There was no stenosis of the pylorus. The walls of the stomach were greatly thickened. On the anterior wall the ulceration had excavated a small area about the size of a sixpence, which was only covered by inflamed peritoneum. The posterior wall was adherent to the pancreas, which was penetrated by the tumour. The tumour lay spread along the lymphatics, and had involved the spleen, which was drawn towards and was adherent to the stomach. The regional lymph glands were involved, and one secondary deposit, the size of a walnut, was found in the left lobe of the liver. Microscopically the tumour was a rapidly growing adenocarcinoma. Mucoid degeneration was found in the primary and secondary foci.

JAMES MACKENZIE INSTITUTE.

Gastric and Duodenal Ulcer.

AT the James Mackenzie Institute for Clinical Research, St. Andrews, Professor ARCHIBALD YOUNG (Glasgow University) read a paper, on November 22nd, on some surgical aspects of gastric and duodenal ulcer. Professor Young

began by referring to a previous statistical study from his clinic[1] into the efficiency of present-day methods of diagnosis of ulcers of the stomach and duodenum, and into the value of gastro-jejunostomy in their treatment. The diagnostic error had been found to be small, and to depend, not upon any fault in the methods, but upon erroneous deductions from the data which they provided. In that series 66.6 per cent. of patients had made a complete recovery after gastro-jejunostomy, while 83 per cent. had been greatly or considerably improved. The operation performed was the usual posterior anastomosis, without pyloric exclusion. The further series upon which the lecturer's present paper was based included 146 cases, of which 12.3 per cent. were gastric, 28.08 per cent. duodenal, and 59.59 per cent. pyloro-duodenal. Of these, 130 had occurred in males, 24 in females, and in 8 males the location of the ulcer was doubtful. Professor Young emphasized his belief that many pyloro-duodenal ulcers, although often classified as gastric, had more in common with true duodenal ulcers than with those of the gastric type. He still performed gastro-jejunostomy as an almost routine operation for peptic ulcer, and found it especially valuable in duodenal and pyloro-duodenal cases. In his experience pneumonia was the chief cause of post-operative death, and he thought that its incidence might be diminished by careful nursing and, since the condition was often of embolic origin, gentleness in handling the ulcerated segment. The therapeutic effect of gastro-jejunostomy was due to a combination of factors, of which drainage and access to the stomach of the alkaline contents of the duodenum were important. It was unnecessary to occlude or divide the pylorus to ensure relief. Excision of the ulcer was generally valueless, unless combined with some method of securing gastric drainage. Plastic operations at the pylorus were no more efficacious than simple gastro-jejunostomy. Gastrectomy he reserved for large and adherent gastric ulcers, believing that so severe an operation was seldom justifiable for more limited lesions. Partial gastrectomy did not eliminate, though it might lessen, the risk of recurring ulceration. He then outlined the work of Rosenow, Mann and Williamson, and others on the selective affinity of certain strains of streptococci for the mucosa of the stomach and duodenum, and referred to the discovery by Kodama of a direct lymphatic connexion between the wall of the gall bladder and that of the duodenum; also to Wilkie's recent observations. With regard to treatment of perforated ulcer great advance had been made in the speaker's lifetime. Much of this was due to Murphy, who had consistently taught rapidity in operating and the minimum of interference. Gastro-jejunostomy was rarely required either at the primary operation or later, as Nature was able to correct a considerable degree of the narrowing which might follow the infolding of the ulcer. Professor Young preferred to drain the area of perforation locally. In diagnosis, most stress should be laid on the patient's history. Clinical and laboratory tests helped much, but interpretation of the results of *x*-ray examination was very liable to error.

At a meeting of the Manchester Pathological Society on December 14th, with the president, Mr. F. H. WESTMACOTT, in the chair, Dr. W. SUSMAN read a paper on the relation of the spleen to immunity. Dr. Susman referred to the work of many observers, which had indicated that the reticulo-endothelial system, and the spleen in particular, were concerned with the production of immune bodies. He thought it might be assumed that the pulsations of the spleen afforded an indication of its function. These pulsations, as shown by Schafer, were inhibited by atropine and augmented by injections of brain extract. In a small series of rabbits the subcutaneous injection of a boiled watery extract of brain tissue had enhanced the process of agglutinin formation against *B. typhosus*. The administration of the same extract to a large series of mice infected with pneumococcus Type I had shown a survival of 51 per cent. of a total of 262, while an equivalent number of control animals had died. The survival extended over two to three weeks, and, in several instances, up to five to eight weeks, when the experiments were concluded.

[1] *Lancet*, April 7th, 1923.

Reviews.

URINARY DISEASES IN CHILDREN.

A VOLUME on affections of the urinary tract in children,[1] by Professor NOBÉCOURT of Paris, is the fourth of a series of clinical studies, all written by him and derived from his hospital practice and teaching. The plan of the present volume follows strictly that of the three preceding; its main feature is the presentation of individual cases with their special history, symptoms, signs, course, and treatment, accompanied by a commentary that connects their peculiar manifestations with the general aspects of the disease. Of the 350 pages that make up the present volume about two-thirds are devoted to various types of nephritis in children and infants. These types are at first presented on a clinical basis, according as oedema, haematuria, or a high blood urea is the predominant feature, but the classification is not rigid; a good many examples of mixed types are given, and the occurrence of acute, subacute, and chronic cases is illustrated also. These case records show how often mixed types occur, also that definite haematuria is a common feature of nephritis in children, and that apparently complete repair of the kidney tissues may occur, even in prolonged and severe cases. Two interesting chapters deal with cases of nephritis complicated by purpura and by convulsions, and the relation of nephritis to infantilism is also illustrated by a striking case. In the records of the cases special attention is given to the dimensions of the heart and liver, and to the blood pressure and the blood urea, these observations being often shown as graphic curves and outline diagrams. Other chapters in this admirable clinical repository deal with pyelitis and pyelonephritis, orthostatic albuminuria, paroxysmal haemoglobinuria, malignant renal tumours, bladder calculi, and waxy disease. In this collection of full and accurate case records Professor Nobécourt has made a valuable contribution to a difficult subject, and although in his discussions of the cases he does not attempt any general or systematic statement of the pathology of nephritis—this, indeed, being beyond his present aim—yet he provides valuable material towards such an end. This kind of book, an incorporation of case records with commentary, is of greater value to the practitioner of some experience than to the student, and it is a kind of medical writing in which success can only be achieved by one experienced both in the practice and teaching of medicine. Professor Nobécourt has this twofold experience in a high degree, and in this series of clinical studies he conveys to his readers almost as vividly as he does to his hospital classes his gifts as physician and teacher.

BASAL METABOLISM IN DISEASES OF THE THYROID.

THE volume under review is entitled *Clinical Investigations into the Basal Metabolism in Diseases of the Thyroid Gland*.[2] It takes the form of a Supplement to *Acta Medica Scandinavica*, and is, in effect, an abridged and in some respects an elaborated English translation of a treatise by Dr. EGGERT MÖLLER, first published in Danish in 1925. The greater part of the work is concerned with the problem of Graves's disease. The author, finding that "in the literature proof was not furnished for the general opinion that Graves's disease is always accompanied by increased basal metabolism," undertook an elaborate clinical and laboratory investigation of the problem. The questions which he has attempted to answer are: (*a*) the relation between the amount of basal metabolism and the occurrence of other symptoms; (*b*) the value of basal metabolism determinations in diagnosis and prognosis; and (*c*) the effects upon basal metabolism of different kinds of treatment. The earlier work in the literature is rejected as defective through lack

[1] *Clinique Médicale des Enfants: Affections de l'Appareil Urinaire.* Par P. Nobécourt. Paris: Masson et Cie. 1927. (Med. 8vo, pp. viii+345; 57 figures. 40 fr. sans majoration.)

[2] *Clinical Investigations into the Basal Metabolism in Diseases of the Thyroid Gland.* By Eggert Möller. *Acta Medica Scandinavica*, Supplementum XXI. Copenhagen: Levin and Munksgaard. 1927. (Med. 8vo, pp. 219; 15 figures.)

of clinical detail and a precise definition of what constituted Graves's disease in the subjects studied. Moreover, there was not sufficient appreciation of the necessity for repeated determinations in order to obtain true basal values. The method employed by Dr. Möller was that of Kregh, which, with certain precautions which are discussed in detail, is well adapted to clinical employment. As a result of 106 determinations on 34 different normal subjects it was concluded that a deviation of 10 per cent. from the standard basal metabolism, calculated from the standard values of Benedict and Harris, for the weight, size, and sex of the subject, was to be regarded as in all probability pathological. Some 89 cases of Graves's disease were then studied. The case records are omitted, but may be found in the original Danish edition. Only those cases exhibiting goitre, tremor, and permanent tachycardia are regarded as cases of true Graves's disease. For these the basal metabolism was found to vary from 98 to 190 per cent. of the normal, nine cases out of ten giving values above 110 per cent. The frequency of the symptoms is placed in the order tachycardia, tremor, goitre, nervousness, increased basal metabolism, palpitation, sweat secretion, and exophthalmos. It is concluded that a basal metabolism lying within normal limits does not exclude the presence of the true disease. Treatment by *x* rays and by resting and overfeeding led to a fall in the basal metabolism, but usually the subjective symptoms disappeared first. In 50 per cent. of the cases *x*-ray treatment led to definite improvement or even cure. It is suggested that cases not responding to *x* rays should be immediately operated upon.

Turning to other thyroid conditions, it was found that almost without exception cases of simple goitre gave normal basal metabolism values. On the other hand, every case of myxoedema gave a low value. The lowest was never less than 60 per cent. of the normal—a level which was consequently taken to represent that attained when there is complete functional inactivity of the thyroid. The effect of thyroid treatment was always to cause a rise towards normal basal metabolism, but the maximum effect was not attained for two to eight weeks. This rise is an early symptom of mitigation of the condition, as it generally precedes the disappearance of the subjective symptoms. The author engages in a discussion of the principles and practice of thyroid treatment. This extensive report contains full protocols and elaborate analyses of the laboratory data, which are certainly the most comprehensive available on the subject.

THERAPY, EXPERIMENTAL AND PRACTICAL.

THE first volume of a German textbook of practical therapy as the result of experimental investigation,[3] edited by Professor R. VON DEN VELDEN and P. WOLFF, was reviewed in our issue of December 11th, 1926 (p. 1125). It dealt with the general principles of therapeutics; the second volume, which has now appeared, discusses the application of these principles in disease. It contains forty-eight articles by some thirty different authors, but Professor von den Velden is the chief contributor, for he has written eleven articles. The contributions vary in merit, and it is possible to mention a few only.

One of the most interesting is Professor Frank's article on diabetes mellitus; it concludes with a short account of synthalin therapy. Dr. Richter writes briefly and in a cautious tone on endocrine therapy. He concludes his summary of the various methods of testicular therapy with the words: "Unfortunately, rejuvenation is at present only a pious hope." He considers, however, that ovarian therapy may give positive results. His article provides an example of the unfortunate slowness with which knowledge passes from one language to another, for he ascribes to Laqueur and Zondek the discovery of the ovarian hormone "folliculin" or oestrin, and does not mention the previous work of Allen and Doisy.

The article by Dr. O. W. Gross on the therapeutics of diseases of the alimentary canal is a very good summary. Other articles deserve mention because they deal with subjects often omitted from ordinary textbooks of medicine. Such are the articles on the treatment of drug habits (Dr. P. Wolff), on psychic therapy (Professor J. H. Schultz), and on the treatment of insomnia and of pain (Professor H. Curschmann).

Enough has been said to indicate the general scope of the book. The aim of the editors was to set forth a system of rational therapeutics founded on the basic sciences of physiology, pathology and pharmacology, and bacteriology, and they deserve great credit for making so courageous an attempt. This second vodume may be regarded as a summary of the present state of therapeutics, and as such presents certain points of interest. For one thing a comparison of the various articles shows very clearly how uneven advance has been. In certain articles, such as those on diabetes mellitus and on gastric and thyroid disease, the contributors can describe fairly exact rules of treatment based on physiological principles. The same can be said regarding the treatment of diseases due to spirochaetes and trypanosomes. But in many of the articles describing some of the commonest diseases the writers can only give general directions for symptomatic treatment, which are much the same as were employed fifty years ago.

It would, of course, be irrational to expect a uniform advance in medicine, but the failure of certain sections to make any appreciable move forwards is very striking. Yet it is indeed a hopeful sign that such a work as that before us has been produced. No one will suggest that the present output of medical literature is inadequate in volume, but chief attention is directed to the diagnosis of disease and to pathology; and an attempt to produce a general account of the treatment of disease based on scientific evidence is to be welcomed, if only as a stimulus to research in the more neglected fields of therapeutics.

MEDICAL ENTOMOLOGY.

THE London School of Tropical Medicine has already published six volumes of memoirs relating severally to Fiji, Ceylon, Egypt, the Western Pacific, the Caribbean, and Southern Rhodesia; and in continuation of the series the London School of Hygiene and Tropical Medicine has now issued its first memoir on *Researches in Polynesia and Melanesia*.[4] The work is by Dr. PATRICK A. BUXTON, director of the department of entomology, assisted by Mr. G. H. E. HOPKINS, and relates principally to medical entomolgy, including climate as being a part of the environment in which the insects live. In a subsequent publication the author proposes to recount his investigations into filariasis and other matters which relate to human beings. The visit to the south-western Pacific, which lasted throughout the years 1924-25, was undertaken with a view to co-operating with the New Zealand Government and its local administration and department of health in the study of filariasis; the general programme was that special studies should be made on the mosquito which carries the filaria, and that an attempt should be made to reduce the numbers of the mosquitos in this particular region.

The volume contains a mass of carefully observed facts, which are not only interesting in themselves, but which will be invaluable to those who propose to carry on researches in the regions concerned. Although the mosquito Aëdes (stegomyia), the vector of filariasis, was the main object of investigation, the author has properly included the whole of the insect fauna of the district in his research, as being the natural setting in which to regard Aëdes itself. Several species of Aëdes are known, *A. variegatus* being the carrier of filariasis; and of this species there are several races or varieties, each of which has a fairly definite and limited distribution in the islands of the south-western Pacific. The life-history, geographical distribution, habits, and morphology of these varieties have been fully worked out and described by Dr. Buxton, with

[3] *Handbuch der Praktischen Therapie als Ergebnis Experimenteller Forschung.* Herausgegeben von Reinhard von den Velden und Paul Wolff. Zweiter Band, Erste Hälfte und Zweiter Hälfte. Leipzig: J. A. Barth. 1927. (Sup. roy. 8vo, Erste Hälfte, pp. 688, 22 figures; Zweiter Hälfte, pp. 645, 22 figures. M.76 the two parts.)

[4] *Researches in Polynesia and Melanesia*, Parts I-IV (Relating Principally to Medical Entomology). By Patrick A. Buxton, M.R.C.S., D.T.M. and H., assisted by G. H. E. Hopkins, M.A., F.E.S. London: The London School of Hygiene and Tropical Medicine. 1927. (Cr. 4to, pp. xi + 260; 12 plates, 43 figures. 10s. 6d.)

the addition of diagrams to assist in their diagnosis. In discussing the question of the control of these insects, he explains that no work directed against the one disease-bearing species can be effective unless general anti-mosquito measures are also prosecuted vigorously, because the success of such a campaign depends largely on the help of the mass of the population. Natives will not be induced to believe in the efficacy of anti-mosquito measures which leave the irritating, night-biting *Culex fatigans* and the virulent *Aëdes kochi* in undisturbed activity. Referring to control measures in such a district as the Apia municipal area in Samoa, where the medical department co-operated during a period of six months in an attempt to reduce the number of mosquitos, it is stated that Culex could be readily dealt with by such simple measures as screening the ventilators of septic tanks with gauze and the periodical disinfection of privies, while with regard to *A. kochi* it could be exterminated by forbidding the growing of taamu and taro, the leaves of which are its favourite breeding places. *Aëdes variegatus* presents a more difficult problem, but the author is able to state that the measures adopted greatly reduced the numbers of the mosquito. Its breeding places are coco husks and shells, cacao pods, rotting cavities in trees, crab holes in sandy places on the shore, water butts, discarded vessels, and the like. Systematic work by trained health inspectors would soon reduce the number of mosquitos from these sources, but in the present state of knowledge extermination is impossible owing to the proximity of great forests with their innumerable little rot-holes which are the stronghold of the insect. The only measures, therefore, at present available are constant inspections and repeated cutting of bush; these are expensive and not generally efficient, and the conclusion is reached that the only prospect of efficient control of the insect lies in the still further study of it, in the hope of devising some plan which will give some measure of permanent reduction in its numbers. The problem is an important one, since it is estimated that 58.3 per cent. of Samoans over fifteen years of age are infected and suffer from the associated diseases.

A considerable part of Dr. Buxton's volume is devoted to a description of experiments performed on *Aëdes variegatus* and *argenteus*. Thus experiments were carried out with a view to studying the factors which control egg-laying; the factors which cause the eggs to hatch; the mortality of the insect; the length of the larval and pupal stages; the relation to temperature and food supply, salinity, and the amount of light. Further experiments dealt with abnormal conditions such as starvation, poisoning, and partial drying. The work concludes with an interesting general summary of the natural history of the insect, based on the author's own work and other published researches. A statistical account of malaria and filariasis is added by way of appendix, and two appendices on the hatching of *Aëdes variegatus*, one by Dr. J. F. C. Haslam and the other by Professor M. Greenwood and E. M. Newbold, are included in the volume.

The volume is beautifully got up and contains a large number of figures illustrating diagnostic points in the structure of the insects and photographic plates showing the special features of their breeding places.

FOLK-LORE AND MEDICINE.

DR. DAN MCKENZIE, who has written pleasantly and effectively on various themes, professional and lay, has in *The Infancy of Medicine*[5] discussed the questions in what manner and to what extent primitive thought has influenced the evolution of the science and art of medicine. The subtitle, "An Enquiry into the Influence of Folk-Lore upon the Evolution of Scientific Medicine," defines the scope of the essay, which won the prize in the history of medicine at the University of Glasgow in 1925; it is modestly dedicated as "a small tribute to the honour and glory" of the author's Alma Mater. The analysis and description of primitive psychology contained in these well written chapters, which really constitute a series of essays, may, it is suggested, among other uses provide the young practitioner with a key to "the more obscure workings of the partially educated lay mind." There can be no doubt that it is a store of material most useful to the increasing number of medical men interested in the history of their profession.

The first part, rather less than a quarter of the volume, deals with primitive medicine in a general manner in three chapters on the evolution of the medical man, primitive pathology, and primitive treatment. The savage medicine man, it is noted, was for centuries linked more or less closely with the priest. Later he attained an independent position, and an attractive account is given of Egyptian medicine. Among much information on primitive pathology it is suggested that the discovery of calculi in the body may have given rise to the idea of a "sending" or the mystical propulsion of a concrete substance into the victim's body, analogous to the entrance of a bullet. While demoniac possession ranked higher than magic as an etiological factor, the latter was regarded as more effective in primitive therapeutics.

The fourteen chapters of the second part deal with individual groups of methods of treatment, and trace the way in which the present position of medical thought has been evolved. Beginning with full descriptions of the evolution of animal and botanical remedies, astrology, the employment of stones, soul cures, healing wells, colours, numbers, the evil eye, and cures by saliva are reviewed in detail. Further chapters deal with midwifery, pregnancy, and menstruation; with surgery, major and minor, and with counter-irritation, and circumcision and other mutilations; thus bringing to a close a work which must have cost years of persevering research, much thought, utilization of experience, and hard writing, for it certainly makes easy reading, and compels admiration.

ANTE-NATAL AND POST-NATAL CHILD HYGIENE.

DR. FELDMAN'S treatise on *The Principles of Ante-natal and Post-natal Child Hygiene*[6] is intended to be a companion volume to his previous publication on *The Principles of Ante-natal and Post-natal Child Physiology*, which we noticed favourably in 1920. The new book is a worthy successor, and its comprehensive grasp of a wide subject, its well arranged mass of detailed information, and its full bibliography, conveniently grouped at the end of chapters, should ensure for it a welcome by all interested in infant and child welfare. The history and development of child hygiene through the ages is treated by the author in fifty pages crowded with graphic details; these are followed by a chapter on biometrics, in which the modern methods of statistical analysis are applied to some of the problems of child hygiene. The remainder of this introductory part of the book is devoted to a consideration of the causes of death and their prevention in the ante-natal, neo-natal, and post-natal states, together with the question of maternal mortality. The second part of the book deals with ante-natal hygiene, and the third part with post-natal hygiene from birth to the onset of puberty. It is impossible to describe fully some 750 pages of carefully collated facts, reasoned conclusions, and practical suggestions. The chapter headings may serve, however, to indicate the ground that is covered. They include: general nursery hygiene, breast and artificial feeding, the nutrition of infants and children, care of the teeth and the sense organs, prevention of infectious diseases, physical and mental growth, and the hygiene of adolescence. These and other subjects are dealt with concisely but in detail, the attractive style of the writing preventing the weariness in reading that would otherwise be inevitable. The author has attempted, and has succeeded in, the difficult task of producing a book which will interest alike pediatric physicians, lay workers at infant welfare centres, students of ante-natal care and welfare, and all concerned with the well-being of children. The general practitioner will find in it answers to the innumerable questions of young

[5] *The Infancy of Medicine: An Enquiry into the Influence of Folk-Lore upon the Evolution of Scientific Medicine.* By Dan McKenzie, M.D.Glasg., F.R.C.S.Ed., F.S.A. London: Macmillan and Co., Ltd. 1927. (Demy 8vo, pp. xiv + 421. 15s. net.)

[6] *The Principles of Ante-natal and Post-natal Child Hygiene.* By W. M. Feldman, M.D., B.S., M.R.C.P.Lond., F.R.S.Ed. London: J. Bale, Sons and Danielsson, Ltd. 1927. (Med. 8vo, pp. xxiv + 743; 159 figures. 25s. net.)

parents. The book is provided with an abundance of illustrations; and there are two good indexes, one dealing with subjects and the other with the names of authorities on child hygiene.

VOCATIONAL GUIDANCE FOR THE TUBERCULOUS.

MESSRS. W. I. HAMILTON and T. B. KIDNER have held various posts in America in what they call personnel and rehabilitation work. From their experience in this they have produced a chatty little book on *Advising the Tuberculous about Employment*,[7] into which they have managed to compress a large amount of information, together with a useful bibliography of the subject. The authors consider that the keynote of work in rehabilitating the tuberculous person is "individualization," and they describe the investigations necessary for what they term "vocational advisement."

They call attention to the evils of encouraging amongst the disabled the "lure of the new job"; and they lay down the principle that efforts should be made to return a man to his old, or an allied, job. They believe that village settlements are chiefly valuable in giving opportunity for prolonged convalescence; and that, even if a few permanent settlements are established by philanthropic individuals, very few dwellers in such settlements will become permanent "settlers" or "colonists." As an alternative to village settlements in solving the problem of the employment of ex-patients, the special workshops of the Altro Manufacturing Company of New York are described. This enterprise was started some years ago by a leading Hebrew hospital and social welfare organizations. It provides part-time work, paid on a piece-work basis, under medical supervision, with periodic re-examinations of the worker, so that his work and rest are regulated in accordance with his physical conditions. No patient is regarded as cured until he has had at least two years' continuous good health after sanatorium treatment. Apparently the experiment has been a great success, and the industry is now housed in a fine modern factory building.

Messrs. Hamilton and Kidner's book should be useful to workers in vocational guidance.

WORLD HYGIENE.

IN that complex of nations which go to make up the manifold world of to-day national health, like national prosperity, is not solely a national problem: it reacts also upon other countries, both neighbouring and remote. They may, and do, as prudence suggests, put up their barriers against "infection" from beyond their frontiers as against "the hand of war," but with the broadening altruism of our age new relationships are being established and the health of nations too weak to help themselves has recently become the voluntary care of the strong. An interesting commentary on the system of procedure which gives effect to these good enterprises is contained in Dr. C. W. HUTT'S *International Hygiene*,[8] which deals among other topics with the international sanitary conventions, immigration and emigration, venereal disease, noxious drugs, the traffic in women and children, and industrial hygiene. The work is relieved by vivid passages, as in the account of the drastic means adopted by the Chinese Republic in 1912 to suppress opium smoking. The President made the taking of opium an offence punishable by death. Thousands were put against a wall and shot by firing parties, and men were beaten senseless in the midst of their ruined fields. The export of Indian opium to China was abolished. And the result was that opium was grown in Korea, the Japanese drove a roaring trade, and the cultivation of opium in China itself increased by leaps and bounds. There is a graphic note on the clearing of the island of Principe of sleeping sickness by measures which included the perambulation of the jungle by negroes wearing a back-piece of bird-limed cloth as a tsetse fly-paper.

[7] *Advising the Tuberculous about Employment.* By W. I. Hamilton and T. B. Kidner. London: Baillière, Tindall and Cox; Baltimore: The Williams and Wilkins Co. 1927. (Cr. 8vo, pp. ix + 171. 9s. net.)

[8] *International Hygiene.* By C. W. Hutt, M.A., M.D., D.P.H. London: Methuen and Co., Ltd. 1927. (5½ × 9, pp. 261. 10s 6d. net.)

NOTES ON BOOKS.

IN reviewing the first volume of the third edition of BALY'S *Spectroscopy*, about two years ago, we said that the subject was growing rapidly, and was destined to attract an increasing number of experimental workers, so that it was not surprising that the bulk of the treatise had increased. A second and third volume[9] have now appeared, and complete the work. The second describes the application of interference methods and treats of methods of illumination, the nature of spectra, fluorescence and phosphorescence, and the photography of the spectrum. In each of these sections a vast amount of research has been carried out by many workers, and the products of their labour stood in need of being collated, connected, and compared. Professor Baly, both by his extensive knowledge of the work done and by his own share in it, is well qualified to perform this duty, and he has spared no effort to make his treatment comprehensive. He is the more to be congratulated that, having such a large volume of matter to deal with, he has yet succeeded in giving to every subordinate incident a description which will be most helpful to anyone engaged in the study. Not least important is the attention he has devoted to historical sequence in the various developments of discovery. In the third volume theoretical considerations of the electronic structure of the atom are discussed and the development of modern theory described. The plain recital of this development in the spectral series and of the Zeeman effect would alone have made a considerable treatise, but the author has been indefatigable in writing a story of forty years' progress dealing minutely with each advance, great and small, mainly in their order of sequence. Chapters on the Stark effect and emission band spectra, prepared with the same thoroughness, complete the volume. The book appears destined to be the leading authority on the subject.

The *Abstracts of Dissertations Approved for the Ph.D., M.Sc., and M.Litt. Degrees in the University of Cambridge for the Academical Year 1925-1926*[10] are forty-four in number, and naturally deal with a wide range of subjects in the Faculties of Agriculture, Biology, Classics, English, History, Mathematics, Medicine, Physics, and Chemistry. The Faculty of Biology is divided into two; under the heading of Biology A there are dissertations on botanical and geological problems, and under Biology B on experimental psychology and biochemistry; Dr. C. S. Hicks's dissertation for the Ph.D. degree dealt with the chemical and physiological relationships of thyroxine, and threw doubt on the formula originally suggested by Kendall; that of Mrs. D. M. Needham on the *p*H and *r*H of the cell interior was based on the microchemical injection of *p*H indicators into the interior of *Amoeba proteus*, marine cells, and a few facultative anaerobes; and that of Dr. Harold Taylor on the hydrogen-ion concentration of the blood cells. From the Faculty of Medicine there are two dissertations; Dr. Stanley Griffith gives the results of his prolonged investigations into the etiology of human tuberculosis in Great Britain, and Dr. J. P. Hoet discusses three different points—the fate of sugar disappearing under the action of insulin, the onset of rigor mortis, and the action of drugs on the spleen. The abstracts are, of course, succinct, but the dissertations are deposited in the University Library, where they can be consulted.

The third volume of the *Annals of the Pickett-Thomson Research Laboratory*[11] contains an historical survey of researches on the streptococci generally; it is stated that the next issue, which it is proposed to publish in 1928, will deal with the pathogenic forms. The present volume indicates how differentiation of the many varieties of streptococci may be facilitated; it includes a large number of photographs, and also coloured plates illustrating the use of Dr. Warren Crowe's differentiating medium. The general arrangement, the full bibliography, adequate indexes of authors and subjects, and the compilation of an immense amount of information should render this volume of considerable assistance to working bacteriologists.

Medicus[12] is the French equivalent of the *Medical Directory*, but in some directions its range of information is even wider. Thus, it describes the regulations and courses of the faculties of medicine and pharmacy; of the military, naval, and colonial

[9] *Spectroscopy.* By E. C. C. Baly, C.B.E., M.Sc., F.R.S. In four volumes. Vols. II and III, third edition. Textbooks of Physical Chemistry. London and New York: Longmans, Green and Co., Ltd. 1927. (Demy 8vo, Vol. II, pp. viii + 398; 85 figures, 3 plates; 18s. net. Vol. III, pp. viii + 532; 55 figures; 22s. 6d. net.)

[10] Published by authority. To be obtained from Mr. R. E. Priestley, University Registry, Cambridge. (Demy 8vo, pp. 73.)

[11] *Annals of the Pickett-Thomson Research Laboratory*, Vol. III, November, 1927. London: Baillière, Tindall and Cox; Baltimore: The Williams and Wilkins Company. 1927. (11 × 8½, pp. 301; 57 plates. 42s. net.)

[12] *Medicus:* Guide Annuaire du Corps Médical Français. Année, 1928. Paris: A. Rouzaud. 1928. (Roy. 8vo, pp. 1400 + xv. 30 fr.)

services; of the dental and veterinary schools; and for the practice of midwives. On the other hand, in the actual directory very little information is given to show the status of the doctor; and though the medical personnel in the French colonies has now been added, there is no record of practitioners resident in foreign countries. The publishers find the same difficulty as in England in getting medical men to keep them informed of changes of address, and the preface to the volume contains an appeal for better notification. The book is copiously besprinkled, even in the text, with advertisements, and there are some illustrations of Parisian hospitals.

We have received a copy of the first Spanish medical directory,[13] which contains not only the names and addresses of Spanish doctors, specialists, druggists, and veterinarians, but a large quantity of miscellaneous information, including a short sketch of the history of medicine, an account of Spanish legislation affecting the medical profession, Spanish medical faculties and watering places, and an alphabetical list of proprietary drugs registered in Spain.

In the seventh edition of the *Pharmacopoeia of the Queen's Hospital for Children* few changes have been made in the useful list of medicinal formulae; but the sections dealing with the dieting and care of infants and children, and with the nursing and general management of common disorders, have been thoroughly revised. These instructions, embodying present knowledge in clear and simple language, should fulfil their purpose of securing for the children in their own homes and at the hands of their mothers the simple but effective treatment they recommend.

[13] *Anuario Médico de España*, 1927. Madrid: Editorial Apolo. (Sup. roy. 8vo, pp. 1436. 15 pesetas.)

THE COLLEGE OF SURGEONS OF AUSTRALASIA.

[FROM OUR NEW SOUTH WALES CORRESPONDENT.]

A MEETING of the Council of the College of Surgeons of Australasia was held in the British Medical Association building, Sydney, on September 28th and 29th. The president, Sir George Syme, occupied the chair, and Dr. H. S. Newland, Dr. Ralph Worrall, Mr. H. B. Devine, and Dr. A. L. Kenny, honorary secretary, were present.

First Annual Meeting.

Sir George Syme reported that, with Dr. A. L. Kenny and Mr. H. B. Devine, he had visited Canberra, and had an interview with Sir John Butters, the chairman of the Federal Capital Commission, to discuss the possibility of a site being provided in Canberra for the college. It was found that an area of five acres had been reserved for medical scientific bodies, and Sir John Butters said that he was prepared to recommend the Federal Government to allot a site in this area for the college. It was adjacent to the Museum of Comparative Anatomy and opposite the site of the University. It was on the crest of the ridge on the north-western side of the city, close to Parliament House and near the suburb of Ainslie. The preliminary offer of this site was accepted.

It was resolved that the first annual meeting of the Fellows of the College be held at Canberra, if possible in the early part of March, 1928, and that the chief topics for discussion should be plastic surgery of all parts of the human body, and the history of colleges of surgeons. The Executive Committee was instructed to invite Fellows to submit papers for acceptance, and was given power to ask for special papers on the selected subjects from particular Fellows. The committee was further authorized to obtain anatomical, pathological, and other exhibits in connexion with the papers, and, if necessary, to make payments for such exhibits. It was resolved to invite the Governor-General to open the session of the first annual meeting of the Fellows of the College, and to be present at the reading of the papers on the history of colleges of surgeons. It was determined that no formal dinner be held in connexion with the first annual meeting.

It was resolved that His Excellency Sir John Goodwin, K.C.B., F.R.C.S., Governor of Queensland, and formerly Director-General of Army Medical Services, be admitted an Honorary Fellow of the College, and that he should be invited to attend the first annual meeting of the College. It was arranged to hold a discussion on hospital policy.

A scientific meeting is to be held in each State annually six months after the annual meeting, except in the State in which the annual meeting had last been held.

The Council affirmed the principle of establishing a periodical to be styled the *Journal of the College of Surgeons of Australasia*.

Constitution.

The honorary secretary, Dr. A. L. Kenny, reported that the by-laws (a sketch of which was published in these columns on April 30th, 1927) had been revised and would be submitted to the first annual meeting. The governing body is to be a Council of ten elected Fellows, with such officers as are appointed by the elected members of the Council—namely, a president, two vice-presidents, an honorary secretary and treasurer, and a director-general. The Council is to appoint an Executive Committee consisting of the president, honorary secretary and treasurer, and three other members of the Council. This committee will act for the Council in such matters as may be delegated to it. The Council is also to appoint a committee for each State of the Commonwealth of Australia and for the Dominion of New Zealand, selected from the Fellows in such State or Dominion, to carry out such duties within the State or Dominion as may be delegated to it by the Council. Such State Committee would be composed of seven Fellows in New South Wales and seven in Victoria, six Fellows in New Zealand (three from the North Island and three from the South Island, six Fellows in Queensland and in South Australia, and three Fellows in Western Australia and in Tasmania.

A candidate for the Fellowship must be nominated by three Fellows of the College resident in the State or Dominion in which the candidate resides who are not members of the Council. Applications will be forwarded to the Director-General of the College, and by him remitted to the Credentials Committee of the State or Dominion in which the candidate resides. The Credentials Committee will report to the Council of the College direct. The Council may admit to the honorary Fellowship surgeons or scientists, resident outside the Commonwealth of Australia and the Dominion of New Zealand, who have advanced the progress of surgery. Fellows are urged to use the title "Mr." instead of "Dr." They pay an annual subscription of five guineas. There are 40 Founders and 163 Foundation Fellows—namely, 46 in New South Wales, 45 in New Zealand, 36 in Victoria, 15 in South Australia, 12 in Queensland, 6 in Western Australia, and 3 in Tasmania. It is proposed to establish a grade of junior members, who may, on conditions to be laid down, become applicants for admission as Fellows. It was resolved that no applicant engaged in general practice in a capital city should be eligible for election as a Fellow of the College.

The Council recommended the advisory committees of the several universities that the examination for the higher degees in surgery should be in two parts: first, in anatomy and physiology, for which a candidate should not be allowed to present himself until he had graduated; secondly, in surgery and surgical pathology.

State Committees.

The Council appointed the following members to act as a committee in their respective States of the Commonwealth and in the Dominion of New Zealand, to carry out such duties as may be delegated to them by the Council in accordance with By-law 6. These appointments would remain effective until the first annual meeting.

New South Wales.—Archie Aspinall, C. E. Corlette, R. Gordon Craig, H. R. G. Poate, F. P. Sandes, R. B. Wade, R. Worrall.
Victoria.—H. B. Devine, R. M. Downes, V. Hurley, Fay Maclure, Allan Newton, E. R. White, B. T. Zwar.
South Australia.—J. Corbin, H. Gilbert, R. H. Pulleine, Malcolm L. Scott, Bronte Smeaton, T. G. Wilson.
Queensland.—E. D. Ahern, G. P. Dixon, E. S. Jackson, Aeneas McDonnell, J. B. McLean, R. A. Meek.
Western Australia.—T. Ambrose, F. A. Hadley, D. D. Paton.
Tasmania.—D. H. E. Lines, J. Ramsay, H. W. Sweetnam.
New Zealand.—(List to be arranged by the Executive Committee.)

Nova et Vetera.

CAPTAIN COOK'S HYGIENE.

BY

CAPTAIN T. S. ANGUS, F.R.G.S., F.R.A.S.,
MASTER MARINER.

UP to the time of Captain James Cook's first voyage round the world in H.M. barque *Endeavour*, scurvy was the scourge of the sea service on long voyages. It was left to this son of a farm labourer, born in 1728 in a small two-roomed cottage (a "clay biggen") at Marton in Yorkshire, to prove during his three long voyages of exploration how this pest could be completely vanquished. James Cook first went to sea as a boy in a North Country collier vessel, and after some twelve years in this rough trade had reached the post of first mate. Scurvy would certainly be unknown on these colliers, as the voyages between ports only lasted a few days; but after he had volunteered into the Royal Navy as an able seaman (he was promoted to master's mate five weeks from first entering) he soon became acquainted with scurvy and other sicknesses to which seamen of the time were liable. The *Eagle*, on which he first served, returned to port with 130 men on the sick list out of a crew of 400; this was after only a three or four months' cruise in the Channel and Bay of Biscay. The chief cause of this high rate of sickness seems to have been that the men were insufficiently clothed, having been hurriedly impressed owing to the great shortage of seamen at the time. After two years Cook was promoted master, and served in that capacity on the North American station, where he had abundant experience of scurvy. How he distinguished himself at the taking of Quebec by Wolfe, and surveyed the coasts of Newfoundland, which brought his character and talents prominently before the Admiralty and Royal Society, does not come within the scope of this sketch. Suffice it to say that he was afterwards selected to command the *Endeavour*, which was sent to Tahiti in the South Sea Islands to observe the transit of Venus in 1769. On passing Cape Horn into the Pacific on the way to Tahiti, his surgeon was able to report that the crew were as free from scurvy as on the day they left Plymouth five months previously. After leaving Tahiti, where the transit of Venus was successfully observed, he proceeded to New Zealand, a small part of which had been discovered by the great Dutch navigator Tasman. Cook spent six months in sailing round the islands and charting the coasts and harbours he saw, with wonderful accuracy considering the means at his disposal, and then sailed for the east coast of Australia, which he explored and charted; unfortunately, while thus engaged his ship ran on a coral reef off the Queensland coast and was nearly lost; with great difficulty he succeeded in getting her into a small river, where he beached her and effected temporary repairs. The prosperous Cooktown now stands at the place where the ship was laid ashore for repairs. Eventually he was able to put to sea, but with a very leaky ship, and sailed up the coast through most dangerous navigation. The whole of this coast had never been visited by a European before. Passing through Torres Straits he at length reached Batavia, and on the day of his arrival he sent a short dispatch to the Admiralty by a Dutch ship, in which appears: "I have the satisfaction to be able to say that I have not lost one man by sickness (scurvy) during the whole voyage." This was indeed an achievement, and had it not been for the unavoidable delay at Batavia needed to repair the ship—for the damage she had received on the reef was found to be very much greater than Cook knew—there is no doubt he would have been able to say the same when he arrived in England. It happened that it was a very sickly season at Batavia, and his crew and officers rapidly fell ill with fever and dysentery, which continued for some weeks after he left, and before he arrived at the Cape of Good Hope he had lost thirty-four persons out of his complement of ninety-four.

The antiscorbutics carried in the ship, with some others, were chiefly

"Malt to be made into a wort, saurkrout, orange and lemon juices, portable soup, sugar, and vegetables at all times when they could be got. These were of such infinite service to the people in preserving them from scorbutic taint, that the use of the malt was (with respect to necessity) almost entirely precluded. At Tierra del Fuego, wild celery was collected, and every morning breakfast was made of this herb, with ground wheat and portable soup. No opportunity was ever lost of getting wild celery or any other wild herb that was to be found."

In a paper read before the Royal Society, Cook himself says,

"But the introduction of the most salutary articles either as provisions or medicines will generally prove unsuccessful unless supported by certain regulations. On this principle many years' experience enabled me to lay a plan whereby all was governed. The crew were at three watches except on some extraordinary occasions."

In the ordinary way the thirty able seamen he had in the *Endeavour* would have been divided into two watches for the ordinary work, where fifteen men would be always on deck attending to the sailing of the ship, and the others below off duty, night and day every four hours alternately; this is known as "watch and watch," or "four hours on and four hours off," as the men themselves call it. On this plan the seamen would never get more than four hours' sleep at a time. With three watches the men would be divided into groups or watches of ten men, and that number on deck would be quite sufficient to sail a small ship like the *Endeavour*. In ordinary weather conditions every seaman would have eight consecutive hours off duty twice in twenty-four hours, with two four-hour watches on deck intervening. Cook goes on to say,

"By this means they were not so much exposed to the weather as if they would have been at watch and watch, and generally had dry clothes to shift themselves into when they happened to get wet. Proper methods were used to keep their persons, hammocks, clothes, etc., constantly clean and dry. Equal care was taken to keep the ship clean and dry between decks; once or twice a week she was cured with fires. When this could not be done, she was smoked with gunpowder mixed with vinegar or water. I have frequently used a fire in an iron pot at the bottom of the well [where the lower end of the ship's pumps go for pumping out bilge water], which was of great use in purifying the air in the lower parts of the ship. To this and cleanliness as well in the ship as among the people, too great attention cannot be paid; the least neglect occasions a putrid and disagreeable smell below which nothing but fires will remove.

"Proper attention was paid to the ship's coppers, so that they were kept constantly clean. The fat boiled out of the salt beef I never suffered to be given to the people, being of opinion that it promotes scurvy. I was careful to take in water whenever it could be got, even though we did not want it, but always had plenty for every purpose."

Cook had great difficulty in getting his seamen to eat the unusual strange messes he had had cooked for them—portable soup, boiled with wheat, wild celery, etc.—but he had the same at his own table in the wardroom with his officers, and insisted that they should be eaten. When the men began to realize that the captain and his officers ate them they took to them and soon got used to them. It is recorded in the journal of his first voyage that two of the men refused to eat the fresh beef provided for them at Madeira, for which he punished them with twelve lashes each.

So far I have only referred to Cook's first voyage in the *Endeavour*, a small vessel of not more than 366 tons burthen, 97½ feet long, by 29 feet broad, and 11½ feet deep. The height between decks where the crew berthed was only about 5½ feet, so that with all her people on board it was pretty close stowage, showing that only by unremitting care and attention on the part of the captain could her crew be kept in good health. On Cook's second voyage he had two ships, also, like the *Endeavour*, built at Whitby for the coal trade and, like her, selected on Cook's strong recommendation as being the most suitable type of vessel that could be got for the purpose. The selection was most

amply justified. This second voyage lasted for three years and eighteen days, and in that time, on his own ship, the *Resolution*, he did not lose one man by scurvy or any other sickness. His consort, the *Adventure*, on the other hand, lost several men from scurvy; the reason for this was undoubtedly that Captain Cook was not on board that ship.

After arriving home from that voyage he was unanimously elected a Fellow of the Royal Society, and immediately after starting on his third and last voyage he was awarded the Copley medal.

Again he had two ships; he was unfortunately killed in an affray with the natives at Hawaii, but Cook's work was most thoroughly accomplished, and both his ships arrived home after an absence of four years and two months without a single case of scurvy occurring in either ship, showing that after his lamented death the officers who succeeded him thoroughly carried out his system of caring for the health of the crews.

In conclusion it may be of interest to add that Captain Cook's name was often quoted at sea in my young days in connexion with cleanliness and using the fat boiled from the salt beef, which sailors were fond of adding to their extemporized messes. Also, if a sailor grumbled about being set to a job which he thought was not of much use, he would be told it was to "keep the scurvy out of his bones." It is well known that Cook used to keep his people well at work, always finding something useful for them to do, even in the most relaxed times.

CANCER RESEARCH IN FRANCE.

THE study of cancer has led in France to the establishment of a system of regional anti-cancer centres. The idea was put forward by the late Professor Bergonié of Bordeaux, and taken up by his friend M. Paul Strauss, who had been interested for many years in public health questions and recently was Minister of Hygiene. In 1922 M. Strauss formed a "Commission du Cancer," to inquire into the steps which should be taken to develop the idea, with Dr. Rouse, director of the Institut Pasteur, as president. The committee advised that centres should only be established in places where a faculty of medicine or a *grande école* was already in existence; that they should be administered by the Minister of Hygiene; and that the objects of the centres should be treatment, teaching, and research.

As long ago as 1914 the Institut Pasteur had formulated plans for building in Paris a clinic and laboratories for an institution to be known as the Fondation Curie. The work was suspended during the war, but in 1919 it was begun again, and since that date the Fondation Curie has worked under the control of Professor Regaud. When Professor Bergonié's idea of anti-cancer centres materialized in 1923 Professor Regaud looked on it with sympathy, and in course of time the Fondation Curie and the various centres became affiliated. The present position is that the Fondation Curie remains entirely free from all Government control, and carries on its work in its own way; but it is looked upon as an inter-regional centre and works in close co-operation with the directors of the regional centres.

In forming regional centres existing departments of hospitals have been converted in many cases to meet the new requirements. In other centres entirely new buildings have been erected. There are now seven centres established in hospitals in Paris and its suburbs; in the provinces there are eleven dispersed amongst the larger towns. Apparently it is not considered necessary that any more centres should be established. At present the centres display varying degrees of efficiency, since some have been at work for nearly three years, while others are still in the making. But the attainment of a high standard of co-ordination is furthered by periodic meetings of the directors for the discussion of new ideas and methods in the treatment of cancer. The chief methods employed at the centres are surgical and radiological.

We are indebted to Dr. Malcolm Donaldson and Professor Sidney Russ for a report on the work done at some of these regional centres. The highest state of efficiency in organization and technique was, of course, found in the Fondation Curie, where several grams of radium are available for therapeutics and research. Remarkable results have been obtained in this institution in the treatment of carcinoma of the tongue and of the cervix uteri. In the former disease, according to Professor Regaud, nearly one-fourth of the number of out-patients have been thoroughly cured, while in nearly another fourth the lingual localization has disappeared. In cancer of the cervix a number of quite inoperable patients were living five years after treatment, many with no signs of recurrence. A curious occurrence amongst the cases treated in 1919 was that, while 6 out of 64 advanced inoperable patients, and 6 out of 18 borderline patients, were still living after five years, none of the 5 operable patients treated survived for that length of time. The improvement in technique at the institution is shown by the fact that, while the mortality at the end of one year was 65.5 per cent. in 1919, in 1924 it had dropped to 28.7 per cent.

The observers visited also the centres at Strasbourg, Lyons, Marseilles, Montpellier, Toulouse, and Bordeaux. While all these centres were displaying activity, in most cases they had been developed too recently to enable their records of treatment to be of any value. Research, however, was being pursued in various directions. All the centres visited possessed some radium, and had effective *x*-ray installations. At Lyons, Marseilles, and Montpellier the director of the centre was a surgeon; at Strasbourg and Toulouse a radiologist, and at Bordeaux a clinical pathologist. The staffs attached to the centres varied in number and nature. Thus there were, in addition to the director, two medical men and six lay assistants in Strasbourg; in Lyons seven other medical men and nine unqualified assistants; in Marseilles one other surgeon, two pathologists, and two qualified radiologists. In Montpellier, where the centre at the Hôpital Suburbain is linked up to the department of pathology at the Faculté de Médecine, there were five medical men in addition to the director, including three professors at the University. The Toulouse staff consists of six consulting surgeons, two medical assistants, one radiologist in addition to the director, a clinical pathologist, and a biochemist. At Bordeaux the director is assisted by surgeons, one radiologist, two assistant medical officers, one intern and three externs, and three pathologists. So far as radium treatment is concerned the researches at the Fondation Curie have been so systematic that the methods in use at that institution are followed largely at the other centres.

Financial support for the expenses of establishing and maintaining centres appears to be obtained from a variety of sources. Not only are voluntary subscriptions invited, and grants received from the municipality and the French Government; recourse is also had to the pari-mutuel. The Government grant does not seem, as a rule, to be very generous. The personnel of the centre sometimes consists of full-time salaried officers; in other cases it is honorary.

It is evident that in France a national effort of some magnitude is being made in the attempt to conquer cancer. The co-ordination of eighteen regional centres by means of the inter-regional centre, the Fondation Curie, must make for efficiency; and the periodic meetings of directors all engaged in the pursuit of improvement in teaching, treatment, and research should be stimulative of ideas. Dr. Donaldson and Professor Russ think that much may be learnt by other countries from the efforts that are being made in France to-day. They have not come back from their tour prepared to answer the question whether more cancer patients are being treated by better methods than formerly. They do not know whether more interest in the study of cancer has been aroused, or whether there is more widespread knowledge of the disease among the medical men of the country. They are, however, convinced that in France radiotherapy in connexion with cancer rests on a firmly established basis of clinical observation combined with laboratory researches of a fundamental character, and that the methods adopted are worthy of study by other workers in the field.

SUPPLEMENT
TO THE
BRITISH MEDICAL JOURNAL.

LONDON, SATURDAY, DECEMBER 31st, 1927.

CONTENTS.

	PAGE
The British Medical Association and Collective Investigation. PART I.	245
CURRENT NOTES:	
THE B.M.A. CHARITIES FUND	247
STAFF ANNUAL LUNCHEON	247
ASSOCIATION NOTICES	248
MEETINGS OF BRANCHES AND DIVISIONS	248
BOOKS ADDED TO THE LIBRARY	251
NATIONAL INSURANCE:	
LONDON PANEL COMMITTEE	250
CORRESPONDENCE	251
NAVAL AND MILITARY APPOINTMENTS	252
VACANCIES	252
ASSOCIATION INTELLIGENCE AND DIARY	252
DIARY OF SOCIETIES AND LECTURES	252
BIRTHS, MARRIAGES, AND DEATHS	252

THE BRITISH MEDICAL ASSOCIATION AND COLLECTIVE INVESTIGATION.

PART I.—PAST EXPERIENCE.

"One work—a work that specially appertains to the Association, the work of collective action, of the pull altogether of the profession, I mean the work of cumulative observation, or accumulated data—has been too little attempted; or, if attempted, has been productive of too little result. I am aware that anything on a large scale of this kind is a serious undertaking, a gigantic enterprise; and I feel it, therefore, to be worthy of this gigantic Association. It is perhaps the only work in which all, or a large part, of the members can really and fully participate, and to which each can contribute his mite. . . . To engage the members of the Association as participators in any division of such work would prove one of the most powerful inducements to the cultivation of observation and thought respecting the mass of facts which are passing now too often unheeded or unnoticed before their eyes; and would tend, more than any other thing, to deepen their interest in the science of medicine, and to impart the charm of wider usefulness to the daily routine of life." (Sir GEORGE MURRAY HUMPHRY in his Presidential Address to the Association at Cambridge, 1880.)

From time to time, with varying success, the British Medical Association has sought to enlist the co-operation of the profession at large or of some special group of practitioners in scientific work which may be described as that of collective investigation or research. Generally speaking, the appeal has been made incidentally when the elucidation of some particular problem undertaken by the Association has required data not obtainable by ordinary means. But there has emerged upon occasion a demand, especially insistent during the last few years, for a more general application of the method of collective investigation. It has been felt that in the records of individual experience, could these be obtained in sufficient quantity, lies the solution of many problems of pathology and treatment, and that general combination, intelligently directed to a common end, should be a source of power in the scientific, no less than in the economic, field of action. A scheme for collective investigation formulated by a special subcommittee of the Science Committee in response to this demand was approved by the Representative Body at Edinburgh this year, and two inquiries, one into the treatment of varicose ulceration and the other into after-effects of gastro-enterostomy, have been set on foot this month. Of these inquiries full particulars will appear in the BRITISH MEDICAL JOURNAL next week. Meanwhile, some light may be thrown on the possibilities and limitations of the present scheme by a review of the experience of the Association in earlier undertakings of a similar nature. This review will be confined to inquiries conducted by the method of collective investigation indicated above, which must be distinguished from two methods in more general use and far more easily directed and controlled—namely, the joint conduct of inquiry by a committee of experts, and the undertaking of specified pieces of related research by individual workers, whether or not under the direction of a committee.

INCIDENTAL INVESTIGATIONS.

The following is a brief account of collective investigation carried out in the course of special inquiries undertaken by the Association.

The first of these inquiries in point of time was by no means a success. At the thirteenth Annual Meeting of the Association, in 1862, Dr. C. Handfield Jones, in making "Some remarks on remedies and on the study of their actions," suggested that medical practitioners should collect information on subjects to be determined by the Council of the Association, and as a result of his representations a committee was formed in August of that year to inquire into the action of medicines. Schedules of questions on six selected subjects were issued, but although the membership of the Association was then about 2,200 only 46 replies were received to the questions sent out. The committee was reappointed in 1863, but there is no record of any further activities on its part. It may, however, be considered as the forerunner of the Therapeutic Committee of the Association, which carried out a considerable amount of valuable work between 1887 and 1904.

The Therapeutic Committee was instructed "to obtain from the medical profession its opinion regarding the utility of, and the best method of using, well known or established drugs." While it would seem that the major part of this work consisted of the conduct of inquiries by individuals under expert scientific direction, the method of collective investigation proper was used on occasion. In some cases general appeals were made, in others a number of practitioners were specially appointed to investigate the various therapeutic questions and record their results in a prescribed manner. Information obtained in this way was passed to the Therapeutic Committee by Branch secretaries. As the collective investigations conducted by this committee were necessarily on a small scale the individual contributors were a relatively select body. A considerable amount of useful work was done in this way. The committee ceased to exist in 1904, but its successor, appointed in 1905 with a very similar reference, worked until reduced to the rank of a standing subcommittee of the Science Committee in 1910. In this form it existed until the appointment of a pharmacologist in 1912 made it unnecessary to continue its reference. An investigation undertaken by the Therapeutic Committee in 1905 into silver compounds is an example of complete failure of the collective method. The committee reported in 1906 that a circular requesting clinical information as to the value of the several silver compounds had been sent to nearly 300 members of the profession, "but owing to the small number of replies received" the committee was not in a position to report on the subject.

The very extensive work on anaesthetics accomplished by the Association between 1887 and 1911 included a successful application of the method of collective investigation in striking contrast to the failure just described. An Anaesthetics Committee appointed on the recommendation of the Section of Therapeutics at the Annual Meeting in 1891 instituted an inquiry which covered all

cases in which accurate notes could be obtained of the administration of anaesthetics in the United Kingdom during 1892. The committee sent to all who undertook to co-operate in the work record books containing columns for noting all the requisite details. Observers also received a paper to be filled in at the end of the year of inquiry with a summary of the cases noted, and a general statement as to individual opinion and practice in the administration of anaesthetics; 136 record books were returned, recording details of 25,920 cases. Of the inquiry papers, however, only 94 were returned. Statements without details were received in connexion with 6,147 cases. Possibly the discrepancy between the number of record books and the number of summary sheets returned was due to a premature issue of the latter and their consequent loss before the end of the year. Interim reports on the progress of the work appeared in the *British Medical Journal* annually from 1892 until 1899. In the following year the committee made its final report. This experiment met with a degree of success which was possibly due to the immediately practical interest of the subject of inquiry and the fact that it took its place in a series of investigations undertaken by the Association over a relatively extended period.

An example of a somewhat different method of collective investigation is offered by the work of a committee of twelve on the treatment of simple fractures, appointed on the recommendation of the Section of Surgery at the Annual Meeting of 1910. Notices were published in the *British Medical Journal* and *Lancet* requesting communications from those interested and able to show cases. These notices were supplemented by direct communication with the staffs of general hospitals through the surgical registrars. The several hospitals were then allocated to the different members of the committee, who inspected the cases presented by the local profession, and also hospital and individual records. The greatest possible care was taken to secure the adoption of a uniform standard by the several members of the committee. The report of the committee, published in 1912, contained, in addition to the notes of these cases and the conclusions of the committee, several original communications from English and foreign surgeons. The success of the method adopted is indicated by a request received from the American Surgical Association for advice and assistance in setting up a similar committee.

In each of these inquiries the method of collective investigation was clearly adopted as one means of elucidating some particular problem with which the Association was occupied at the time. The most systematic and comprehensive experiment in collective investigation made by the Association was, however, carried out rather with the object of exploring the possibilities of that method of research than as one line of attack upon a problem already under consideration. It took the form of a number of inquiries directed between 1880 and 1889 by a special committee known as the Collective Investigation Committee.

THE COLLECTIVE INVESTIGATION COMMITTEE, 1881-1888.

In his presidential address at Cambridge, in 1880, Sir George Murray Humphry made the statement quoted at the head of this review. To that challenge the President of Council, Mr. Husband, responded by moving "that the Committee of Council be requested to consider how such suggestions can best be carried into effect." The motion was carried, and a special Committee on Collective Investigation was appointed, and presented a report adopted unanimously by the Annual Meeting at Ryde in 1881. The machinery set up after much discussion included a central committee, local committees, a body providing liaison between the central and local committees, and a secretary acting under the direction of the central committee. The central Collective Investigation Committee consisted of seven members appointed annually at the Michaelmas meeting of the Committee of Council "to arrange, superintend, and direct the work of combined observation." The local committees were formed in the Branches with the object of securing full local discussion on each subject of observation, and adequate co-operation in the conduct of the research. Fifty-four of these committees were actually appointed at an early date, with a membership of between 800 and 1,000. Their activities were not confined to the promotion of research undertaken centrally or the suggestion of further subjects for investigation, for in some cases local collective investigations were carried out under their auspices—for example, an inquiry into syphilis and its effects upon the civil population of various districts, undertaken by the East Anglian Branch, and an inquiry into diphtheria by the Thames Valley Branch. Inquiry forms to be completed in connexion with the various subjects were distributed by these local committees.

Representatives of the local committees met the central body at the sessions of the joint committee, a plan which secured the maintenance of full liaison throughout the work. The services of the secretary were available, not only for the central secretarial work, the collation of records, and formulation of reports, but also for local meetings at which the nature and objects of the inquiries to be undertaken were reviewed. The work was done at first on an honorary basis, but it was later found necessary to retain the services of a paid official.

The first Collective Investigation Committee included the three members of the Association who had been most active in promoting the project—Professor Humphry as chairman, Dr. Mahomed as secretary, and Dr. Ransom. Dr. W. R. Smith of Cheltenham, the first nominee for the salaried post, declined the office, and Dr. Mahomed was succeeded first by Dr. (afterwards Sir) Wilmot Herringham, and later by Dr. (afterwards Sir) Isambard Owen.

The several inquiries were initiated by the publication in the BRITISH MEDICAL JOURNAL of memorandums, specially drawn up by experts in the chosen subjects, indicating the limits of the knowledge already available in connexion with each problem and the particular questions on which it was hoped to throw some light by the method of collective inquiry. Cards of questions on each subject were then issued to individual practitioners, in some cases broadcast, in others on application, but in general through the secretaries or registrars of the local committees. The several inquiries were kept open for relatively long periods, during which in some cases interim reports or additional memorandums on the subjects were issued with a view to stimulating further interest. The form of the final report varied, but in every case the replies received were carefully collated and tabulated, and the results of this tabulation published, together with the report of which they formed the basis. In some cases the actual replies or précis of the replies were also published.

The reports appeared in the first instance in the JOURNAL, but a number were subsequently published in four separate volumes, which included not only the material already indicated, several papers and addresses on the subject of the collective investigation, and general reports from the Central Investigation Committee, but also the forms of inquiry and a number of original communications connected with the subjects of the special reports. The first of these volumes appeared in 1883 and the last in 1888.

Volume I contained a report on an inquiry into communicability of phthisis, based on 1,078 reports received by the committee on this subject. The general opinion as to its value may be indicated by an extract from a Lumleian Lecture by Dr. Andrew, in which it is described as offering "the largest collection (then available) of observations upon the communicability of phthisis amongst men, and by far the most important, inasmuch as it includes communications from men of large experience and of every shade of opinion." Many other complimentary references appeared in the contemporary medical press. This volume contained also preliminary reports on pneumonia, chorea, acute rheumatism, and diphtheria, each of which in the opinion of the committee "distinctly advanced the knowledge of the day in connexion with the subject under inquiry."

The chief contents of Volume 2 were a report on pneumonia, based on reports of 1,065 cases, and a preliminary report on some 400 cases of puerperal pyrexia.

Volume 3 included a review of 439 cases of chorea reported to the committee between April, 1882, and October, 1885, at that date "probably the largest number of original cases ever subjected to careful and detailed examination"; a report on cancer of the breast, based on 210 returns made by 111 observers during 1885 and 1886, together with a large number of letters upon the subject of inquiry, and a collection of preliminary reports upon the general subject of old age, covering its incidental changes; two reports upon centenarians, and a report upon a number of *post-mortem* examinations of centenarians, based on returns received between May, 1884, and December, 1886.

The success of the inquiries on old age and cancer of the breast was mainly due to the personal exertions of Professor Humphry and Sir Henry Butlin.

The last volume contains the final reports upon 655 cases of acute rheumatism, collected between April 22nd, 1882, and June, 1886; upon the maladies of old age and the present condition, habits, and circumstances of aged persons, and upon the connexion of disease with habits of intemperance. This last was based upon 2,500 schedules, covering more than 4,234 cases returned by 178 contributors.

No further volumes of the record were issued after 1888, but a report on the cause of death amongst gouty men, based on 2,852 returns, and a report on the geographical distribution of various diseases were published in the JOURNAL early in 1889. The history of the latter is of interest. Sir William Gull, at the request of the Collective Investigation Committee, brought the subject of international collective investigation before the Medical Congress at Copenhagen, and a general meeting of the congress was devoted to its consideration. The scheme for this inquiry was subsequently drawn up by the International Committee of that Congress in 1884, presumably as the outcome of the deliberations thus initiated by the Association. Reports were prepared in Sweden, Norway, Denmark, and America, and presented at the meeting of the congress at Washington in 1887. In this country the inquiry papers were issued by the Association to its members, and also, at the personal cost of Professor Humphry, to the remaining members of the profession. The report and maps compiled as a result of this inquiry were based upon 3,000 returns.

The response to the inquiries issued, though enthusiastic at first, seems to have diminished gradually until it became so poor that the committee was unable to recommend any further extension of its activities. The abandonment of the work in October, 1889, was foreshadowed in a speech made by Dr. Carpenter in moving the report of the Collective Investigation Committee at Glasgow in 1888. Dr. Carpenter said his position was rather uncomfortable, since the report would probably be the last presented by the committee to the Association. The fact was that they had been too ambitious, seeking to embrace too large an area and to obtain too much information at a time when members of the Association were not likely to adopt the suggestions made by the committee. They had, however, done useful work; but the time had come, in the opinion of the Council, when they ought to draw in their horns in regard to further allowances. As an illustration of the value of the committee's work he might refer to Dr. Isambard Owen's observations on the effects of intemperance on life, which had been suddenly taken up by the outside world, and inferences had been drawn which were not borne out by those observations. That showed how the work of the committee would have developed if the opportunity had been afforded.

Consideration of the experience of the Collective Investigation Committee during the nine years of its work shows that, whatever its ultimate success, it was undertaken under the most favourable auspices. The Association financed its work on a generous scale, actually spending over £6,000 on the work of investigation and of publication of results, at a time when its total annual income ranged roughly from £16,000 to £31,000. The whole scheme was developed in response to a real demand from all sections of the profession. It was undertaken at a time when the individual practitioner was far less burdened with schedules, reports, and certificates than he is at the present day, and when the potentialities of medical statistics had been far less fully explored than is now the case. The enthusiasm for the experiment is evidenced by the number of local committees formed and the scope of their activities on the one hand, and, on the other, by the large number of individuals who co-operated in the work. The detailed returns received in connexion with all the inquiries undertaken were no fewer than 8,838, contributed by 6,403 individuals, and this during a period at the opening of which the total membership of the Association was little over 8,000. Expert assistance was secured as required in the several subjects dealt with. The difficulties as well as the possibilities of such a scheme seem to have been very fully appreciated, and the addresses delivered on the subject of collective investigation might well (apart from references to current theories and methods of treatment) have been written during the last few weeks.

The reports actually issued received at the time very favourable comment, and although the circulation of the record does not seem to have been very extensive, it must be remembered that the majority of the reports which it contained had already been published in the JOURNAL. In the face of all this it seems a little difficult to account for the gradual collapse of the movement. Possibly this was due to an overloading of machinery by the issue of so many inquiries during the same period, and the policy of keeping a given inquiry open for so extended a term. This may well have tended to a dissipation of energy and a loss of the keener interest which might have been secured by a simultaneous concentration of all available energies upon a given subject for a shorter period. It is true, of course, that the shorter the period the more restricted would be the series of reports which might be expected, but in this connexion it may be pointed out that the inquiries were so drawn as to cover, not only observations made during the currency of the investigation, but also records collected by any given individual at an earlier date.

[Part II will give particulars of the new venture in collective research now being undertaken by the British Medical Association.]

British Medical Association.

CURRENT NOTES.

The B.M.A. Charities Fund.

DR. D. D. EVANS, the honorary secretary of the South Essex Division, has forwarded the following contributions to the British Medical Association Charities Fund as additions to the list which was published in the SUPPLEMENT of October 15th, 1927:

	£	s.	d.
Dr. G. Wilson (Westcliff-on-Sea)	1	1	0
Dr. G. H. T. Stovin (Westcliff-on-Sea)	1	1	0
Dr. V. J. Hodgson (Westcliff-on-Sea)	1	1	0

Staff Annual Luncheon.

The annual Christmas luncheon of the staff of the British Medical Association was held in the staff luncheon room at Tavistock Square on December 22nd, when Mr. Treasure, chairman of the Staff Committee, presided. The chairman, having read letters from Sir Dawson Williams (Editor) and Mr. L. Ferris-Scott (Financial Secretary and Business Manager) regretting their absence, conveyed the thanks of the staff to the officials whom they had the honour to entertain as guests, and tendered the deep sympathy of all to Dr. Alfred Cox in his recent bereavement. Dr. Cox thanked the staff for their kind thought in inviting the officials to their annual luncheon. He believed that the staff of the British Medical Association was as happy a family as could be found in London, and this was partly because the Council of the Association always endeavoured to make the staff comfortable, in appreciation of the splendid work they did. Dr. Cox then referred to the coming retirement of Sir Dawson Williams after nearly half a century's service with the Association, for the last thirty years of which he had been Editor of the BRITISH MEDICAL JOURNAL. He spoke of the sincere character of Sir Dawson Williams, of the great work he had done for the Association, and the high esteem in which he was held by the journalistic profession of this country and by the medical press of the world. He suggested that the Staff Committee should send on behalf of that gathering a message to Sir Dawson Williams hoping that his health would soon improve, and regretting that his long and most distinguished connexion with the British Medical Association was coming to an end. Dr. Cox concluded by thanking the staff for their sympathy in his recent time of trial. Dr. N. G. Horner joined with Dr. Cox in expressing appreciation of the generous hospitality of the staff, and in acknowledging the high standard of their work and their unfailing loyalty. Dr. G. C. Anderson also endorsed very warmly what had been said of the staff. He

considered it was a happy thought that prompted such an annual gathering, and hoped the custom would continue in order to give an opportunity for them to meet as a whole at least once in the year.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: NUNEATON AND TAMWORTH DIVISION.—A clinical and pathological meeting of the Nuneaton and Tamworth Division, arranged by Dr. Pracy, will be held at the Nuneaton General Hospital on Wednesday, January 11th, 1928.

BORDER COUNTIES BRANCH: ENGLISH DIVISION.—A meeting of the English Division will be held at Maryport on Friday, January 27th, 1928. Dr. J. N. Douglas Smith will read a paper on the early treatment of puerperal sepsis.

ESSEX BRANCH: SOUTH ESSEX DIVISION.—The following meetings of the South Essex Division have been arranged:

Jan. 10th. Address by Mr. E. C. Hughes on Surgical Mistakes.
Feb. 14th. Dr. A. S. Woodwark.
Mar. 13th. Medico-Legal Meeting.

GLASGOW AND WEST OF SCOTLAND BRANCH: LANARKSHIRE DIVISION.—A meeting of the Lanarkshire Division will be held at St. Enoch Station Hotel on Wednesday, January 11th, 1928, at 3.30 p.m. Dr. Douglas Guthrie (Edinburgh) will read a paper on the septic tonsil and discharging ear, with lantern illustrations.

LANCASHIRE AND CHESHIRE BRANCH: HYDE DIVISION.—A clinical meeting of the Hyde Division will be held in the Maternity and Child Welfare Centre, Hyde, on Thursday, January 26th, 1928, at 8.30 p.m.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—A meeting of the City Division will be held at the Metropolitan Hospital, Kingsland Road, E., on Tuesday, January 3rd, 1928, at 9.30 p.m. Dr. Philip Hamill will read a paper on bacilluria.

METROPOLITAN COUNTIES BRANCH: FINCHLEY DIVISION.—A meeting of the Finchley Division will be held at the Finchley Memorial Hospital on Tuesday, January 10th, 1928, at 8.45 p.m. Mr. W. S. Perrin will read a paper.

METROPOLITAN COUNTIES BRANCH: HAMPSTEAD DIVISION.—A meeting of the Hampstead Division will be held at the Hampstead General Hospital on Thursday, January 12th, 1928, at 8.30 p.m. Dr. T. Izod Bennett will read a paper on the treatment of gastric ulcer.

METROPOLITAN COUNTIES BRANCH: LAMBETH AND SOUTHWARK DIVISION.—A meeting of the Lambeth and Southwark Division will be held at the Lambeth Carlton Club, Coldharbour Lane, S.W.9, on Wednesday, January 25th, 1928, when Dr. A. G. G. Thompson, the newly appointed medical officer of health for Lambeth, will read a paper on the Schick test.

METROPOLITAN COUNTIES BRANCH: LEWISHAM DIVISION.—A clinical evening arranged by the Lewisham Division will be held at the South-Eastern Children's Hospital, Sydenham, on Tuesday, January 17th, 1928.

METROPOLITAN COUNTIES BRANCH: NORTH MIDDLESEX DIVISION.—At the meeting of the North Middlesex Division to be held on Wednesday, January 25th, 1928, Mr. T. H. C. Benians will read a paper on local immunization and antivirus therapy.

METROPOLITAN COUNTIES BRANCH: ST. PANCRAS DIVISION.—A meeting of the St. Pancras Division will be held at the British Medical Association House, Tavistock Square, W.C.1, on Tuesday, January 10th, 1928, at 9 p.m. Sir Squire Sprigge will read a paper entitled "The middle years."

MIDLAND BRANCH: CHESTERFIELD DIVISION.—A meeting of the Chesterfield Division will be held at the Maternity Hospital, Chesterfield, on Friday, January 13th, 1928, at 8.15 p.m. Mr. W. W. King will read a paper on dysmenorrhœa—as a cause and a symptom.

MIDLAND BRANCH: HOLLAND DIVISION.—A meeting of the Holland Division will be held at Spalding on Friday, January 6th, 1928, at 3 p.m. Sir Humphry Rolleston, Bt., Regius Professor of Physic in the University of Cambridge, will give a British Medical Association Lecture on the medical aspects of idiosyncrasies.

NORTH OF ENGLAND BRANCH: BISHOP AUCKLAND DIVISION.—A meeting of the Bishop Auckland Division will be held at the Cottage Hospital, Bishop Auckland, on Friday, January 27th, 1928, at 8 p.m. Dr. J. C. Spence will give a lecture on medical emergencies in children.

NORTH OF ENGLAND BRANCH: TYNESIDE DIVISION.—The Tyneside Division has arranged to hold a dinner on January 13th, 1928. Sir Robert Bolam has promised to attend, and the member of Parliament for Tyneside, Major West Russell, has been invited.

OXFORD AND READING BRANCH: OXFORD DIVISION.—A meeting of the Oxford Division will be held in the Radcliffe Infirmary on Wednesday, January 25th, 1928, at 2.30 p.m. Dr. T. Izod Bennett will lecture on recent advances in pernicious anaemia.

SOUTHERN BRANCH: PORTSMOUTH DIVISION.—The annual dance arranged by the Portsmouth Division in aid of medical charities will be held at the Savoy Café on Tuesday, January 10th, 1928.

SURREY BRANCH: CROYDON DIVISION.—A meeting of the Croydon Division will be held at the Croydon General Hospital on Wednesday, January 11th, 1928, when Dr. G. Lewin will give a lantern demonstration on Bazin's disease. The meeting will be preceded by tea at 4 p.m.

SURREY BRANCH: GUILDFORD DIVISION.—A meeting of the Guildford Division will be held at the Royal Surrey County Hospital, Guildford, on Thursday, January 5th, 1928, at 4 o'clock. Sir John Collie will give an address on "Where law and medicine meet." Tea served at 3.45 p.m.

YORKSHIRE BRANCH: DEWSBURY DIVISION.—A meeting of the Dewsbury Division will be held at the Batley Hospital on Friday, January 13th, 1928. Mr. L. R. Braithwaite (Leeds) will read a paper on chronic pains in the right iliac fossa.

YORKSHIRE BRANCH: WAKEFIELD, PONTEFRACT, AND CASTLEFORD DIVISION.—A meeting of the Wakefield, Pontefract, and Castleford Division will be held at the Great Bull Restaurant, Westgate, Wakefield, on Thursday, January 12th, 1928. Dr. G. B. Hillman will give a lecture on the insurance practitioner and some of his relationships. Supper (2s. 6d.) at 7.45 p.m., will precede the lecture.

Meetings of Branches and Divisions.

BIRMINGHAM BRANCH: NUNEATON AND TAMWORTH DIVISION.

A MEETING of the Nuneaton and Tamworth Division was held at Nuneaton General Hospital on December 14th.

Dr. J. Chalmers of Tamworth was unanimously elected joint honorary secretary, vice Dr. R. J. Cyriax (resigned on leaving the area).

Dr. JAMES F. BRAILSFORD of Birmingham read a paper on the radiology of the alimentary canal, illustrated by a large number of very excellent lantern slides. He emphasized the great importance of a preliminary general screening before proceeding to the examination by barium meal of the part suspected. He instanced cases where such lesions as miliary tubercle of the lungs, gall stones, renal stones, Paget's disease, caries, and carcinoma of the spine and aneurysm had been so discovered when lesions of stomach, appendix, or intestine had been suspected from clinical examination, and where patients had been sent for *x*-ray examination of these organs. About 30 per cent. of gall stones could be seen by ordinary screening, and a very large proportion of the remaining 70 per cent. could be demonstrated by modern methods of cholecystography; when the iodine salt was used there was no reaction whatever in 90 per cent. of cases. Dr. Brailsford then dealt with the radiology of the teeth, œsophagus, stomach, appendix, and small and large intestine, and showed illustrative slides.

A discussion followed in which Drs. PRACY, DUDLEY, and JONES took part. On the motion of the CHAIRMAN, seconded by Dr. E. N. NASON, a very hearty vote of thanks was accorded to Dr. Brailsford for his valuable paper and demonstration.

Prior to this meeting medical practitioners in North Warwickshire made a presentation to Dr. R. J. Cyriax, the tuberculosis medical officer, on his leaving the area. Dr. E. N. NASON occupied the chair, and expressed the regret of practitioners in the area at the departure of Dr. Cyriax. Dr. L. E. PRICE referred to the constant tact and unfailing courtesy shown by Dr. CYRIAX during his seven and a half years in the area. He said that if all public health medical officers did their work in a similar way there would be no chance of friction between them and the general practitioners. He thought that the feeling between the public health officer and the practitioner was improving, and that it was men like Dr. Cyriax who helped so much towards this spirit of mutual understanding and co-operation. On behalf of the medical practitioners in the area he presented Dr. Cyriax with a silver cigarette case, suitably inscribed, and a cheque.

Dr. CYRIAX replied in a characteristically modest speech.

DORSET AND WEST HANTS BRANCH: WEST DORSET DIVISION.

A MEETING of the West Dorset Division took place at the Yeatman Hospital, Sherborne, on December 14th. In the absence of Dr. Rees Dr. UNWIN presided.

Dr. J. WHITTINGDALE showed two cases: (*a*) A man of 50 with epithelioma of the hard palate. Dr. Douglas Harmer had performed a wide removal of the original growth by diathermic cautery. Metastases had occurred in the superior deep cervical glands, which were being treated by the implantation of radium needles. The patient now had facial palsy and lancinating pains due to infiltration of the auriculo-temporal nerve and branches of the cervical plexus. Some relief of the pain had been obtained by infiltration with quinine and urea hydrochloride. (*b*) A woman of 52. In 1924 she suffered from acute appendicitis and had her appendix removed. At the operation a large mass was found in the pyloric end of the stomach, many enlarged and hard lymph glands along both curvatures, plaques of growth diffused over intestines, free fluid in the greater sac, and a hydronephrotic left kidney. The patient was now alive and well and free from any symptoms.

Dr. H. H. MOYLE showed two cases: (*a*) A lad of 15 presenting Fröhlich's syndrome, dystrophia adiposogenitalis associated with interference of the function of the posterior lobe of the pituitary gland. The onset was in 1919 with epileptiform fits. In 1921 severe frontal headaches began. In the following year the patient had measles, followed by acute rheumatism. The obesity had gradually developed since then, and the patient's weight was now 15 st. 2 lb., with a chest measurement of 38 in. His condition was gradually improving; he had some pubic hair and the genitalia were developing. (*b*) A woman of 30 who, on June 2nd last, had a febrile attack similar to influenza, with frontal headache and temperature between 100° and 102°; spleen enlarged and level with the umbilicus; both kidneys movable; no albumin, or

sugar in urine. On June 6th the spleen was larger; the urine contained many motile bacilli, but no pus or blood. On June 13th blood films showed polymorphs 13 per cent., lymphocytes 82 per cent., large mononuclears 4 per cent., and myelocyte trans. 1 per cent.; considerable anisocytosis and poikilocytosis were present; no nucleated red cells; blood platelets numerous. By August the patient was much improved, but the spleen was still enlarged. In November she had the same symptoms as in her initial attack; temperature 102° to 103° F. for several days, and raised for fourteen days; spleen again enlarged. The diagnosis suggested was lymphoid leukaemia.

The cases were discussed, and in regard to the last alternative diagnoses of malaria and paratyphoid fever were suggested.

Dr. GERARD-PEARSE read a paper entitled "The problem of the neurotic abdominal case." This dealt exhaustively with the subject, was supported by numerous references, and relieved by many witty quotations. Many took part in the subsequent discussion and congratulated Dr. Gerard-Pearse on the excellence of his paper.

At the close of the meeting tea was served by the kindness of the medical staff.

ESSEX BRANCH: SOUTH ESSEX DIVISION.

THE annual general meeting of the South Essex Division was held at the Queen's Hotel, Westcliff, on October 18th. Dr. ADAMS (Rayleigh) occupied the chair, supported by a very large attendance. The following officers were elected for the coming year:

President, Dr. H. G. Ellery. *Vice-President*, Dr. W. F. Adams. *President-Elect*, Dr. Ralph Norman. *Secretary*, Mr. D. D. Evans.

Another meeting of the Division was held at the Queen's Hotel, Westcliff, on November 8th. There was a very large gathering to welcome Dr. J. F. WALKER, who gave a short, interesting address on the different side-lines of general practice. At the termination of the "talk" the Division, through Dr. W. F. ADAMS, gave Dr. Walker a handsome canteen of silver in deep appreciation of his valuable services to the Division as their secretary for a period of sixteen years.

GLOUCESTERSHIRE BRANCH.

THE opening meeting of the session of the Gloucestershire Branch was held at the General Hospital, Cheltenham, on November 10th. Dr. J. RUPERT COLLINS presided, and there were fifty-six members present.

Dr. Collins, after expressing the pleasure and profit his year of office had brought him, called on the president for the year, Mr. C. L. COODE, to deliver his presidential address.

Mr. Coode, who was received with acclamation, took as his subject "A series of cases of gastric ulcer occurring in a small hospital." In all there were 101 cases under his personal charge, all of which showed at least two of the three cardinal symptoms: (1) Epigastric pain having a definite relation to the ingestion of food. (2) Vomiting of or after food. (3) Haemorrhage—that is haematemesis or melaena. Cases of duodenal ulcer were included, as in Mr. Coode's opinion these were, in the acute stage, indistinguishable from gastric cases. In the series there were 54 men and 47 women. Dealing first with the women's group, the ages varied from 18 years to 72 years, the average being 32. This group was divided into two classes, according to age: (*a*) 30 years and under—comprising 27 cases. All had symptoms (1) and (2), and two-thirds also had symptom (3). They all belonged to the anaemic servant girl class. This type of case is rapidly disappearing. In this group there were 3 perforations, all operated on, with 1 death. (*b*) Over 30 years—20 cases. In this group were 2 perforations, operated on, and 1 death; 2 others died of haemorrhage. So that among the women there were 47 cases with 4 death. There were 54 cases among men. Of these 20 perforated, 14 being gastric ulcers and 6 duodenal. All were operated on, and 7 died; 2 others died from haemorrhage, 1 from subphrenic abscess, and 1 from bronchitis. Among the men, therefore, there were 54 cases and 11 deaths. Two cases were connected with cancer of the stomach; one proved to be so at the time of operation, and the other, operated on at the age of 69, dying seven years later with symptoms pointing to malignant disease.

Mr. Coode gave interesting details of a number of the cases, and in discussing surgical treatment recorded his opinion that gastro-enterostomy should be done at the same time as closure of the perforation if at all possible, as it might save years of most acute discomfort, and did not appear to add much of a load to the immediate chance of recovery. He concluded with a few remarks on the present position and immediate outlook of the general practitioner, his general thesis being that unless the position were closely watched the general practitioner would find himself ousted from his rightful place before he realized it.

On the motion of Mr. CARDEW, seconded by Sir HARRY WATERS, a vote of thanks to Mr. Coode for his address was carried by acclamation. Subsequently forty-six members had supper at the Cadena Café.

METROPOLITAN COUNTIES BRANCH: SOUTH-WEST ESSEX DIVISION.

A VERY successful reception and dance in aid of the B.M.A. Charities Fund was held in Leyton Town Hall on November 24th. Over one hundred and thirty guests were present, including the deputy mayor (Alderman Bulgin) and the late mayor (Sir James Slade). As a result the sum of £20 8s. 6d. has been handed to the Charities secretary.

A meeting of the South-West Essex Division was held in Livingstone College on December 6th, when Dr. DAN MCKENZIE gave a most interesting lecture, illustrated by lantern slides, on "Untrodden ways in medical history." He indicated the debt of medicine to folklore, and the prevalence of the old traditional medical beliefs in country districts. The bacterium had taken the place of the demon, but the theory of making the place too hot for the demon—or bacterium—still held. The speaker traced the history of several drugs, showing how some were still used for the same diseases as previously, while others, such as digitalis, were now used for quite different ones. Reference was made to the ancient belief that woman was fertilized by water. This probably originated in the Nile Valley, where no seed was sown from year to year, but the overflow of the Nile fertilized the seed left over from the year before. This threw light on the popularity of well treatment for sterility, and to restore health to weakly children. The ancient operations of Caesarean section and trephining were described. In times past Caesarean section was generally performed on a dead or dying woman to save the child, but it was also used at times on the living. A detailed description was quoted of a completely successful operation by an amateur negro surgeon on a young native primipara in Uganda in 1884, where the excellent technique had many resemblances to modern European surgery. Pictures of Neolithic skulls, showing trephine holes, were shown; this operation was performed for epilepsy and severe headache, as well as for fracture. Mention was made of the popularity of trephining in Cornwall in comparatively recent times. Several members took part in the subsequent discussion, and the meeting finished with an appreciative vote of thanks to Dr. McKenzie.

METROPOLITAN COUNTIES BRANCH: CAMBERWELL DIVISION.

A MEETING of the Camberwell Division was held at St. Giles's Hospital, Camberwell, on December 13th, when Dr. ROBERT COX was in the chair.

A clinical demonstration was given by members of the hospital staff under the direction of the deputy medical superintendent, Dr. ROBERTS. Several cases of great interest and practical value were shown, together with a series of *x*-ray plates. The demonstration was followed by tea and a discussion.

A vote of sympathy to Dr. Masterman in his illness, proposed by Dr. COX, and seconded by Dr. HEARD, was carried unanimously. The meeting closed with a hearty vote of thanks to the hospital staff.

NORTH OF ENGLAND BRANCH: BLYTH DIVISION.

THE smoking concert arranged by the Blyth Division was held on December 14th. Mr. CLARKE and Mr. MAUGHAN, dental surgeons, gave some entertaining items of song and recitation. Dr. C. FAIRLIE officiated at the piano and Dr. J. BROWN sang a song. Professor HUME of Durham University gave an address on diabetes, which was thoroughly enjoyed. Volunteers were asked for in regard to the inquiry being undertaken by the Association into the treatment of varicose ulceration, and several members undertook to participate.

NORTH OF ENGLAND BRANCH: DARLINGTON DIVISION.

A CLINICAL meeting of the Darlington Division was held at Greenbank Hospital, Darlington, on November 15th, when an address was given by Mr. D'OYLEY GRANGE (Harrogate) on fracture round the wrist and ankle. The lecture, which was very well illustrated by good lantern slides of skiagrams, afforded material for a full and interesting discussion. A hearty vote of thanks was accorded Mr. Grange at the close.

NORTH OF ENGLAND BRANCH: TYNESIDE DIVISION.

AT a well attended meeting of the Tyneside Division, held on November 25th, Dr. J. C. SPENCE read a most interesting paper on recent advances in medical treatment. Emphasizing the importance of close clinical observation with the judicious use of new methods, he illustrated how advances had recently been made in the feeding of infants, in the treatment of such conditions as rickets, diabetes mellitus, and pernicious anaemia. A keen discussion demonstrated the lively interest aroused.

OXFORD AND READING BRANCH: OXFORD DIVISION.

THE annual meeting of the Division was held at the Radcliffe Infirmary, Oxford, on Wednesday, November 23rd. Dr. WILLIAM COLLIER, sen., was in the chair, and forty members were present.

The following office-bearers were elected for 1928:

Chairman, Dr. Montgomery. *Vice-Chairman*, Dr. Collier, sen. *Representative in Representative Body*, Dr. Yelf. *Deputy Representative in Representative Body*, Mr. H. Whitelocke. *Honorary Secretary*, Dr. W. Stobie.

Dr. COLLIER, the retiring chairman, then read a paper on "Some changes in medical and surgical practice during the past fifty years." Dr. Collier, who was one of Lister's clinical assistants, gave a graphic description of the gradual transition to antiseptic surgery, and remarked that the appalling nature of the conditions prior to its adoption had been insufficiently emphasized. He alluded to Sir Hector Cameron's account of the surgical wards in the Glasgow Infirmary when Lister commenced his work there, including the ravages of hospital gangrene, erysipelas, septicaemia, and pyaemia, the sickening odour pervading the wards, due to putrefactive changes in the wounds, and the moaning and cries of the unhappy patients. In the early part of the nineteenth century John Bell, a distinguished surgeon, had stated that for hospital gangrene no treatment was of any value, and had advocated operating anywhere else than in a hospital. Sir James Simpson, the discoverer of chloroform, had collected from some of the leading surgeons statistics of the death rate for amputations of limbs, and published the figures in 1869. Out of 2,089 amputations in hospital practice, 855 patients had died, a proportion of 2 in 5; whereas out of 2,098 amputations in private

practice only 226 patients had died, or 1 in every 9. Simpson deduced that the large hospitals ought to be destroyed or replaced by huts built of iron, and much controversy had been aroused. Dr. Collier described Lister's introduction of antiseptic surgery, relating incidents which occurred at King's College Hospital, when he was one of Lister's clerks, and mentioned how the students of that time were the first to give enthusiastic support to the new methods. He added that at the Annual Meeting of the British Medical Association at Leeds, in 1869, a Leeds surgeon attacked Lister and ridiculed his methods; it was interesting to note that some fifty-seven years later the oration celebrating the centenary of Lister's birth had been delivered by another and more celebrated Leeds surgeon, Sir Berkeley Moynihan. Dr. Collier then passed to the events following the discovery by Koch of the tubercle bacillus in 1882 and the therapeutic changes which had followed. He commented on the prophylactic value of vaccine injections in the South African and the recent wars, and said he had used anticatarrhal vaccines successfully for many years. Other subjects dealt with included blood pressure, the endocrine secretions, and accessory food factors.

SIERRA LEONE BRANCH.

THE thirteenth scientific meeting of the Sierra Leone Branch was held on November 3rd. In the absence of the president, Professor Blacklock, who was out of the colony, the vice-president, Dr. PRATT, took the chair.

Dr. MACDONALD showed a case of larva migrans in an African child aged 2 years. It had appeared three weeks previously as an itching point on the dorsum of the proximal phalanx of the first finger on the right hand. The itching point had travelled daily, leaving behind it a tortuous raised line 2 to 3 mm. thick on the knuckles, bases of the fingers, and dorsum of the hand. The discussion centred on the probable cause of the eruption and on its treatment.

Dr. WRIGHT showed a case of craw-craw in a pregnant African woman. The condition was one of horny papules, some acuminate, situated on the outer aspect of both legs and arms. The eruption was pruriginous. He also showed a case of molluscum contagiosum in a child aged 18 months. The mother had three children, the oldest 8 years, and all of them had suffered from the disease, although she had never had it.

Dr. EASMON showed a catheter made locally by a blacksmith at Pujehun for a Gallinas man who had stricture and perineal fistula for eighteen years; also a self-retaining bladder drainage tube for permanent cystotomy, showing the marks of recent calculus formation; its lumen was nearly blocked by calculus after being *in situ* for only six weeks. He also showed a patient with a history of dislocation of the jaw, for which forcible but ineffectual attempts at reduction had been made eighteen months previously, together with skiagrams of the case.

Dr. ALEXANDER showed a male, aged 19 years, with tinea circinata involving a large area on face, neck, chest, and limbs, undergoing treatment with tincture of iodine; also a case of flaccid paralysis of the lower limbs present since birth. Both legs were much wasted, and the right anaesthetic, but the trunk and arms were unusually powerful and the patient could move and climb anywhere.

Dr. RENNER showed a case of clinical primary yaws treated with disappearance of eruption after two injections of sulfarsenol. A month later the case relapsed, with primary lesions. Sulfarsenol treatment was repeated without result, and bismuth sodium potassium tartrate had no effect after the administration of 60 grains. The patient was a Syrian boy, and as there was a family history of penicillium dermatocycosis it was considered expedient to have a laboratory examination of the lesions. Dr. Renner undertook to show the case again at the next clinical meeting of the Branch.

Mr. QUINTIN STEWART showed a Fallopian tube and ovary which he had removed from a patient the previous day. The tube presented the appearance of a very early ectopic gestation in its interstitial portion with a small rupture. The case was interesting clinically from the fact that the patient denied any irregularity in menstrual function, stating that she had had a normal period fifteen days before the onset of her present illness; the other point being that, although rupture had occurred over two days before and the abdomen was found to be full of blood clots and fluid blood, the patient was not seriously collapsed. Bleeding had apparently been intermittent. Mr. Stewart showed also a case of haematocele of the tunica vaginalis with abscess of the testicle; the tunica was much thickened and the epididymis enlarged and fibrotic, so that the hydrocele had apparently been present for a considerable time, although the patient was now only 22 years of age. The haemorrhage into the sac of the hydrocele was evidently of recent date, following the septic infection of the testicle, but what the origin of the latter was had not been determined.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: SWANSEA DIVISION.

ON December 8th an official British Medical Association Lecture was delivered at the Hotel Metropole, Swansea, by Dr. S. A. KINNIER WILSON (London) on epileptic variants. At its conclusion he was warmly thanked by the chairman, Dr. DANIEL E. EVANS, supported by Dr. SLADDEN and by Dr. FREDERICK (Port Talbot), ex-chairman of the Division. The lecture was considered to be one of outstanding brilliance and of sustained interest; it showed deep and clear thought and originality. Altogether it was certainly one of the best lectures which the Division has heard for many years.

The lecture was followed by a supper; there was a very fine attendance of medical men from the town and district.

National Insurance.

LONDON PANEL COMMITTEE.

A MEETING of the London Panel Committee was held on December 20th; Dr. H. J. CARDALE was in the chair. It was announced that the administrative expenses of the committee for 1928 had been estimated at £3,600, for which sum application would be made to the Insurance Committee. The chairman remarked that the Panel and Pharmaceutical Committees together were allowed up to an expenditure equal to 2d. per insured person, but actually the budget of the Panel Committee represented less than one halfpenny, so that the committee could not certainly be accused of extravagance.

Financiers in Control of Practices.

The CHAIRMAN drew the attention of the committee to the case of a practice in the East End of London which, he alleged, was controlled by a firm of financiers. Apparently it was the practice of this firm to put a doctor in charge at a certain salary while the firm took the profits, and he believed that the profits were very large, the takings, on the lines of a "sixpenny doctor" practice, amounting to £25 a week. Patients were attracted by cheap fees, and undesirable notices—of a tenor inviting insured persons to transfer to the practice—were exhibited in the surgery. The financing of practices by lay firms, the practitioners themselves being without capital, appeared to be on the increase. Dr. Gregg and he had discussed the matter with the Deputy Medical Secretary of the British Medical Association. Dr. H. E. MORGAN asked whether the General Medical Council could not act in the matter. The secretary (Dr. BATTESON) replied that the Registrar of the Council had stated that from the legal point of view no action could be taken; if a practitioner chose to be employed by anyone, lay person or other, so long as the lay employer did not meddle with the medical work there was no ground for interference. The secretary of one of the medical defence organizations took the same view.

Dr. G. JONES pointed out that the financiers were the principals and the doctor their agent, and should the doctor be negligent in the practice the principals would be associated with him in any proceedings which might be taken. Dr. PARTRIDGE said that the financiers—by whom, he supposed, were meant moneylenders—would be unable to enforce a bond on the part of a doctor not to practise within a given area, and if that were so, there was nothing to prevent these practitioners becoming independent and setting up a practice in the neighbourhood, in which case the financiers would find it unprofitable.

The secretary was instructed to report again on the subject of this particular practice when it was known what effect certain representations had had upon the exhibition of undesirable notices in the surgery.

Practice Arrangements.

The Insurance Committee had requested the Panel Committee to offer observations upon the application of a practitioner who resided and practised in North London for permission to attend and treat insured persons at an address in or near the City, almost four miles distant. The opinion of the Panel Committee was that the practitioner could not provide the personal treatment for his insured patients required by the terms of service at two addresses so far apart. Members mentioned two other cases in which practitioners were said to conduct large practices, in each case at two addresses in quite different parts of London.

The CHAIRMAN stated that a letter had been received from the Ministry of Health to the effect that the Ministry had allowed the appeal of a practitioner against the decision of the Insurance Committee not to permit her to employ an assistant. The ground of the committee's refusal had been the smallness of the number of insured persons on the practitioner's list. The Chairman thought that the result of this appeal would be all to the good.

Surgery Accommodation.

It was reported that a practitioner had, quite unnecessarily, written to the Insurance Committee asking whether he might have two waiting rooms, one for private and the other for insurance patients, and the Insurance Committee, having referred this matter to the Panel Committee, it was proposed that the question be discussed by the joint consultative committee of the two bodies.

Dr. GREGG thought that the number of waiting rooms which a practitioner might have should not even be the subject of discussion. He agreed that it was important to secure that insured patients were not kept waiting longer than private patients, but that was all. Dr. MORGAN said that any attempt to separate insured and private patients into different categories would prejudice the insurance service in the eyes of the public.

Two or three members said that they were compelled to have more than one waiting room, not on account of any distinction between private and insured patients as such, but because occasionally persons in very dirty clothing—for example, a dustman straight from his cart—would come in, to the annoyance of other people in the waiting room.

The CHAIRMAN said that there was no difference of opinion as to the right of the doctor to exercise his discretion, but he thought there would be no harm in talking over the subject with repre-

sentatives of the Insurance Committee, who would almost surely be convinced that the doctor must have liberty in this matter.

It was agreed that the question be discussed by the joint committee.

Ethical Matters.

The Ethical Subcommittee stated that it had investigated a complaint against a practitioner that, taking charge of a practice as a locumtenent during the sickness of the principal, he had secured the transfer of many of the patients to his own list. The number of such transfers during ten weeks had been eighty. The subcommittee could not regard the practitioner's explanation as satisfactory, and recommended that particulars of the case be forwarded to the General Medical Council. This was agreed to, but it was stated that the Panel Committee would not appear as prosecutor.

Another case had reference to the singular inability of a practitioner to improve his signature on his prescriptions. He had been warned twice previously, but the signatures remained quite illegible. The secretary was instructed to warn the practitioner again, informing him that should a further adverse report be received the matter would be referred to the Medical Service Subcommittee.

BOOKS ADDED TO THE LIBRARY.

THE following books were received by the Library of the Association during October and November, 1927:

Anomaly: The Invert and His Social Adjustment. 1927.
Bast, T. H.: The Life and Time of Adolf Kussmaul. 1927.
Bates, W. H.: The Cure of Imperfect Eyesight by Treatment without Glasses. 1927.
Bauer and Stein: Konstitutions Pathologie in der Ohrenheilkunde. 1926.
Bjerre, A.: The Physiology of Murder. 1927.
Brooke, G. E.: Aids to Tropical Medicine. Third edition. 1927.
Brown, W. Langdon: The Endocrines in General Medicine. 1927.
Bulleid, A.: Bacteriology for Dental Students. 1927.
Cancer Review, The. Volumes 1 and 2. 1926-27.
Cattier: La Stérilité Féminine. 1927.
Clark, A. J.: Comparative Physiology of the Heart. 1927.
Clerc, A.: Les Arythmies en Clinique. 1925.
Cobb, G.: The Glands of Destiny. 1927.
Cochrane, R. G.: Leprosy: Symptoms, Diagnosis, and Treatment.
Columbia College of Physicians: Studies from the Department of Pathology. Reprints, volume 20. 1925-27.
Coope, R.: Diagnosis and Treatment of Pancreatic Disease. 1927.
Danielopolu, D.: L'Angine de Poitrine et l'Angine Abdominale. 1927.
Debré et Joannon: La Rougéole. 1926.
Defries, A.: The Interpreter Geddes. 1927.
De Garis: Clinical Notes and Deductions. 1926.
Dejerine, J.: Sémiologie des Affections du Système Nerveux. 2 Tir. 1926.
Dental Board of the United Kingdom: Hygiene of the Mouth and Teeth. 1927.
Dishington: The Patient's Dilemma. 1927.
Dudgeon, L. S.: Bacterial Vaccines. 1927.
Evans and Wentz: The Tibetan Book of the Dead. 1927.
Fitzwilliams, D. C. L.: The Tongue and its Diseases. 1927.
Fraser-Harris, D.: Nerves, Master System of the Human Body. 1927.
Fredericq, H.: Aspects Actuels de la Physiologie du Myocarde. 1927.
Fremantle, F. E.: The Health of the Nation. 1927.
Guy's Hospital Reports. Volume 77, parts 3 and 4. 1927.
Haberland, H. F. O.: Die operative Technik des Tier Experimentes. 1926.
Hannan, J. H.: The Flushings of the Menopause. 1927.
Harvard Monographs on Education. Special Disabilities in Learning to Read and Write. 1927.
Harvey, F.: Health Legislation. 1926.
Hatlehol, R.: Blood Sugar Studies. Acta Medica. 1924.
Herrick, C. J.: Fatalism or Freedom. 1927.
Hornibrook, E. A.: Whole Meal; with Practical Recipes. 1927.
Hunt, E. L.: Plastic Surgery of Head, Face, and Neck. 1926.
Jervis, Sir John: On the Office and Duties of Coroner. Seventh edition; edited by F. Danford Thomas. 1927.
Johns Hopkins Hospital Reports. Volume 21, 4 and 6. 1923-4.
King's College Hospital Pharmacopoeia. 1927.
La Liga Contra el Cancer. Diagnostico preoz del Cancer. 1927.
Lane, Sir Arbuthnot: The Secrets of Good Health. 1927.
Lehmann-Neumann: Bakteriologische Diagnostik. 7 Aufl., 1 Bd. 1926.
Lejars, F.: L'Exploration Clinique et Diagnostique Chirurgicale. 1927.
Lockhart, L. P.: Short Manual of Industrial Hygiene. 1927.
Macdonagh: The Nature of Disease. Volume 2. 1927.
Maclean, Hugh: Modern Methods in the Diagnosis and Treatment of Renal Disease. Fourth edition. 1927.
Meaker, S. R.: Mother and Unborn Child. 1927.
Medical Society of the County of Kings, N.Y. Practical Lectures. 1927.
Mellor, J. W.: Comprehensive Treatise on Inorganic and Theoretical Chemistry. Volume 7. 1927.
Myers, J. A.: The Normal Chest of Adult and Child. 1927.
Négre et al.: Antigenotherapie de la Tuberculose. 1927.
Nouveau Traité de Médecine. Fasc. IX, Sang. 1927.
Ottaway, T.: Law and Practice relating to Coroners. 1927.
Pavlov, I. P.: Conditioned Reflexes. 1927.
Peabody, F. W.: The Care of the Patient. 1927.
Péhu, M., and Dufourt: Tuberculose Médicale de l'Enfance. 1927.
Pitt-Rivers, G. H. L.: The Clash of Culture and the Contact of Races. 1927.
Rowlands, R. P., and Turner, P.: The Operations of Surgery. Two volumes. Seventh edition. 1927.
Rudolf, G. de M.: Therapeutic Malaria. 1927.
Schiff, E.: Das Autonome Nervensystem. 1926.
Schittenhelm, A.: Handbuch der Krankheiten des Blutes und der Blut-bildenden Organe. I, II. 1925.
Sega, A.: La Lotta Antituberculare in Germania. 1927.
Smith, K. R.: Some Facts about Binocular Vision. 1927.
Sykes, W. S.: A Manual of General Practice. 1927.
Van Gehuchten, P.: Les Maladies Nerveuses. New edition. 1926.
Varrier-Jones: Significance of Temperature Variations. 1927.
Veeder, B. S.: Preventive Pediatrics. 1927.
Waldstein, L.: The Subconscious Self. 1926.
Wallis, J. S.: The Teeth and Health. 1926.
Wallin, I. E.: Symbionticism and the Origin of the Species. 1927.
Wenckebach and Winterberg: Unregelmässige Herztätigkeit. 1927.

Correspondence.

The Future of General Practice.

SIR,—May I venture to draw your attention to a matter that has been on my mind for some time? I refer to the condition of the modern country general medical practitioner, the world he is at present living in, and the one he seems likely to come to.

Owing to a variety of causes the lot of the country doctor now is very different from what it was in the nineteenth century. All the savour of medical life is being gradually and steadily taken away. He is no longer the mainstay of our calling, strong and fit for any emergency; but his strength is being removed from him so that there is danger of his degenerating into a mere fag to the hospital surgeon and consultant, a scout for the maternity hospital and the nursing home, all the practice left to him being monopolized for the most part by the child welfare centre and the parish nurse, or absorbed into the panel. All this, of course, is not any individual's fault. It is the direct result of what it would not become me to refer to. I need hardly say that there is no pleasure in posing as a medical Solomon Eagle. It is much nicer to think, as so many do, that everything is for the best in this best of all possible worlds, and that there is no need for us to clear our minds of cant.

There is no sound of alarm on this account, or very little, in the medical press, and still less interest is taken in this matter by the public, but, after wandering for more than forty years in the wilderness of general practice, I know that what I say is true, and therefore venture to sound this note of discord. It may be that the open stable door has let most of the horses out, but it is worth while to try to shut it and so save the few that remain.—I am, etc.,

Derbyshire, Dec. 13th. A COUNTRY DOCTOR.

Superannuation for Insurance Practitioners.

SIR,—No competent advocate has in recent times appeared to plead this special cause. So, with apologies for intruding, I crave a few lines to submit—crudely, I am afraid—a subject for possible consideration at the now, no doubt, imminent conferences on remuneration of practitioners under the National Health Insurance Act. The point I should like to see a discussion on is that of superannuation—it is overdue—for such practitioners.

Among our representatives on various committees some, at least, are poor men's doctors. They have now done their bit by the R.A.M.C., and they have placed the public health departments on their pedestals. If our leaders now turn their eyes towards the poor doctor himself they will look on some of life's tragedies in the ranks of the plodding middle-class practitioner, into whose conditions in life no paternal commission has made inquiry, and who in life's winter has no guaranteed provision for the vagaries of fate.

The financial aspect is, to some extent, a subject taboo with an honourable profession, but we may as well be honest with ourselves: the riches of the majority have been acquired, and few have entered the arena equipped with the proverbial silver spoon. The acquisition of substance is an indispensable feature in our lives, and the profession owes something to those members who, amidst their ministrations, have somewhat overlooked the importance of the material side in relation to self.

In connexion with the operations of the National Health Insurance Act a considerable sum of spare money has been amassed. Already pension schemes are in the field for the beneficiaries, the superintendents, and the referees, and I certainly see no reason why the chief operators of the scheme, the insurance doctors, should not have a say in the share out.

Having decided on the general principle, details could soon be arrived at. I might suggest a modest £300 per annum on attaining 60 years of age, and after twenty years' satisfactory service under the National Insurance Act, the pensioner to at once relinquish both panel and private practice, and not to engage in any remunerative employment. For those crippled by definite ill health a reduced allowance, proportionate to length of service, could be arranged. The capitation rate need not be raised, and the bugbear of buying and selling practices could be eliminated.

Under such a scheme both panel practitioners and patients should profit. I am sure many practitioners hold views similar to my own, and I trust they will endorse my remarks.—I am, etc.,

December 17th. SENEX.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

Surgeon Lieutenant Commander T. N. D'Arcy to the *Calliope*.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon Captain W. K. Wills, O.B.E., V.D., is placed on the retired list.
Surgeon Sublieutenant T. A. Brand to be Surgeon Lieutenant.

ROYAL ARMY MEDICAL CORPS.

Major-General S. F. St.D. Green, C.B., C.B.E., K.H.P., late R.A.M.C., retires on retired pay.

Colonel L. Humphry, C.M.G., late R.A.M.C., to be Major-General, vice Major-General S. F. St.D. Green, C.B., C.B.E., K.H.P., to retired pay.

Lieut.-Colonel J. F. Martin, C.M.G., C.B.E., from R.A.M.C., to be Colonel, vice Colonel L. Humphry, C.M.G., promoted.

Lieut.-Colonel C. R. Sylvester-Bradley is placed on the half-pay list on account of ill health, August 12th, 1927. (Substituted for notification in the *London Gazette*, June 21st, 1927.)

Major and Brevet Lieut.-Colonel G. De la Cour, O.B.E., from a Professor Royal Army Medical College, is granted the rank of Temporary Colonel whilst employed as Consulting Surgeon to the British Army, vice Temporary Colonel J. W. West, C.M.G., K.H.S., vacated.

Major H. W. Russell, O.B.E., to be Lieutenant-Colonel, vice Lieut.-Colonel J. F. Martin, C.M.G., C.B.E., promoted.

ROYAL AIR FORCE MEDICAL SERVICE.

Flight Lieutenant J. C. Osburne to R.A.F. Station, Upper Heyford.

REGULAR ARMY RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel A. H. McN. Mitchell, having attained the age limit of liability to recall, ceases to belong to the Reserve of Officers.

Lieutenant J. R. E. Sansom, from A.E.C. Regular Army Reserve of Officers, to be Lieutenant, and retains his present seniority.

INDIAN MEDICAL SERVICE.

Major-General T. H. Symons, C.S.I., O.B.E., has been nominated by the Governor-General to be a member of the Council of State in succession to the Hon. Major-General A. Hooton, C.I.E., resigned.

Colonel A. B. Fry, C.I.E., D.S.O., to be Honorary Surgeon to the Viceroy, vice Major-General G. Tate, K.H.S., vacated.

Lieut.-Colonel (Brevet Colonel) J. N. Walker to be Colonel, vice Colonel K. V. Kukday, C.I.E.

Lieut.-Colonel J. Anderson, an Agency Surgeon, on return from leave, is posted as Civil Surgeon, Sibi.

Major R. W. G. Hingston, M.C., has retired.

The services of Major R. V. Morrison are placed permanently at the disposal of the Government of Burma.

TERRITORIAL ARMY.

ROYAL ARMY MEDICAL CORPS.

Major G. E. J. A. Robinson, M.C., T.D., having attained the age limit, is retired, and retains his rank with permission to wear the prescribed uniform.

Lieutenant A. M. Cooke to be Captain.

To be Lieutenants: Second Lieutenant G. T. Hankey (late R.F.A.), H. Watson, and F. McD. Walker.

Hygiene Companies.—Lieutenant C. M. Willcox, late R.F.A. (Special Reserve) to be Lieutenant.

VACANCIES.

ABERDEEN: ROYAL ABERDEEN HOSPITAL FOR SICK CHILDREN.—Lady Superintendent.

ACCRINGTON: VICTORIA HOSPITAL.—House-Surgeon. Salary £150 per annum.

BARRY URBAN DISTRICT COUNCIL.—House-Surgeon at the Accident and Surgical Hospital. Salary £200 per annum.

BRISTOL GENERAL HOSPITAL.—Honorary Medical Registrar.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Honorary Gynaecologist.

FINSBURY TREATMENT CENTRE.—(1) Two Minor Ailment Surgeons. (2) Anaesthetist. (3) Secretary.

GUILDFORD UNION.—Resident Assistant Medical Officer at the Institution. Salary at the rate of £150 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.3.—Two House-Physicians. Honorarium £50 for six months.

HULL ROYAL INFIRMARY.—Second House-Surgeon. Salary at the rate of £150 per annum.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £150 per annum.

LINCOLN: THE LAWN.—Medical Superintendent. Salary £700 per annum.

MANCHESTER: ANCOATS HOSPITAL.—House-Surgeon (Orthopaedic). Salary £100 per annum.

MANCHESTER: ST. MARY'S HOSPITALS.—(1) Two House-Surgeons for the Whitworth Street West Hospital (Maternity). (2) House-Surgeon to the Whitworth Park Hospital (Children). Salary at the rate of £50 per annum each.

MINISTRY OF PENSIONS.—Junior Resident Surgical Officer at the Highbury Group of Hospitals, Birmingham. Salary £300 per annum.

NORTHAMPTON: CREATON SANATORIUM.—Medical Superintendent. Salary at the rate of £550 per annum.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.15.—Honorary Anaesthetist. Honorarium £20 per annum.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.1.—(1) Clinical Assistants for (*a*) Surgical Out-patients, (*b*) Children's Department Out-patients, (*c*) Throat, Nose, and Ear Department Out-patients, (*d*) Electro-therapeutic and Light Department. (2) Junior Clinical Assistants in Medical, Surgical, and Special Departments.

SEAMEN'S HOSPITAL SOCIETY.—Honorary Assistant Physician at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C.

WOOD GREEN URBAN DISTRICT.—Medical Officer of Health, etc. Salary £900 per annum, rising to £1,000.

CERTIFYING FACTORY SURGEON.—The appointment at Bracknell (Berks) is vacant. Applications to the Chief Inspector of Factories, Home Office, Whitehall, S.W.1.

MEDICAL REFEREE UNDER THE WORKMEN'S COMPENSATION ACT for the Districts of the Bristol, Wells, Weston-super-Mare, and Yatton County Courts (Circuit No. 54). Applications to the Private Secretary, Home Office, Whitehall, S.W.1, by January 21st, 1928.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Tuesday morning.

British Medical Association.

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQUARE, W.C.1.

Departments.

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and Business Manager. Telegrams: Articulate Westcent, London).
MEDICAL SECRETARY (Telegrams: Medisecra Westcent, London).
EDITOR, *British Medical Journal* (Telegrams: Aitiology Westcent, London).
Telephone numbers of British Medical Association and British Medical Journal, Museum 9851, 9852, 9853, and 9864 (internal exchange, four lines).

SCOTTISH MEDICAL SECRETARY: 6, Drumsheugh Gardens, Edinburgh. (Telegrams: Associate, Edinburgh. Tel.: 24361 Edinburgh.)
IRISH MEDICAL SECRETARY: 16, South Frederick Street, Dublin. (Telegrams: Bacillus, Dublin. Tel.: 4737 Dublin.)

Diary of the Association.

JANUARY.

3 Tues. City Division: Metropolitan Hospital, Kingsland Road, E. Dr. Philip Hamill on Bacilluria, 9.30 p.m.
5 Thurs. Guildford Division: Royal Surrey County Hospital, Guildford. Sir John Collie on Where Law and Medicine Meet, 4 p.m.
6 Fri. Holland Division: Spalding. B.M.A. Lecture by Sir Humphry Rolleston on the Medical Aspects of Idiosyncrasies, 3 p.m.
10 Tues. Finchley Division: Finchley Memorial Hospital, 8.45 p.m.
Portsmouth Division: Annual Dance, Savoy Café.
St. Pancras Division: B.M.A. House, Tavistock Square, W.C.1. Sir Squire Sprigge on "The Middle Years," 9 p.m.
South Essex Division. Mr. E. C. Hughes on Surgical Mistakes.
11 Wed. London: Conference on Puerperal Morbidity and Mortality, 2 p.m.
London: Hospitals Committee, 2.15 p.m.
Croydon Division: Croydon General Hospital. Dr. G. Lewin on Bazin's Disease, 4 p.m.
Lanarkshire Division: St. Enoch Station Hotel. Dr. Douglas Guthrie on the Septic Tonsil and Discharging Ear, 3.30 p.m.
Nuneaton and Tamworth Division: Clinical Meeting, Nuneaton General Hospital.
12 Thurs. London: Insurance Acts Committee, 12 noon.
Hampstead Division: Hampstead General Hospital. Dr. T. Izod Bennett on Gastric Ulcer, 8.30 p.m.
13 Fri. London: Public Health Committee, 2.30 p.m.
18 Wed. London: Medico-Political Committee, 2.15 p.m.
19 Thurs. London: Journal Committee, 2.30 p.m.

DIARY OF SOCIETIES AND LECTURES.

ROYAL SOCIETY OF MEDICINE.

Section of History of Medicine.—Wed., 5 p.m., Miss Tildesley: (1) *Post-mortem* Trepanning about Mid-Sixteenth Century; (2) Extensive Healed Skull Wounds, probably of Roman-British or Anglo-Saxon Period. Anthropological Specimens will be exhibited from the Museum of the Royal College of Surgeons.

Section of Surgery.—Wed., 8.30 p.m., Mr. Zachary Cope: Criticism of Current Views of Shock and Collapse.

Section of Tropical Diseases.—Thurs., 8.15 p.m., Laboratory Meeting at the London School of Hygiene and Tropical Medicine, 23, Endsleigh Gardens, Euston Road, W.C.1. Illustrations will be given of the techniques discussed at the last meeting of the Section.

POST-GRADUATE COURSES AND LECTURES.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.15.—Mon., 2.30 to 5 p.m., Medical, Surgical, and Gynaecological Clinics; Operation. Tues., 2.30 to 5 p.m., Medical, Surgical, Throat, Nose, and Ear Clinics; Operations. Wed., 2.30 to 5 p.m., Medical, Skin, and Eye Clinics; Operations. Thurs., 11.30 a.m., Dental Clinics; 2.30 to 5 p.m., Medical, Surgical, and Ear, Nose, and Throat Clinics; Operations. Fri., 10.30 a.m., Throat, Nose, and Ear Clinics; 2.30 to 5 p.m., Surgical, Medical, and Children's Diseases Clinics; Operations.

ROYAL NORTHERN HOSPITAL, Holloway Road, N.—Tues., 3.15 p.m., External Eye Diseases.

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE, Hammersmith, W.6.—Mon., 10 a.m. to 1 p.m., Genito-urinary Operations, Skin Department, Surgical Wards; 2 p.m., Surgical Wards, Gynaecological and Eye Departments. Tues., 10 a.m. to 1 p.m., Medical Ward Visit, Demonstrations in Venereal Diseases; 2 p.m., Medical Wards, Throat, Nose, and Ear Department; 4.30 p.m., Special Lecture: Malaria and Blackwater Fever. Wed., 10 a.m. to 1 p.m., Children's Medical Out-patients, Medical Wards, Demonstration in Medical Pathology; 2 p.m., Surgical Wards, Eye Department. Thurs., 10 a.m. to 1 p.m., Neurological Department, Demonstration of Fractures; 2 p.m., Eye and Genito-urinary Departments, Gynaecological Ward. Fri., 10 a.m. to 1 p.m., Gynaecological Operations, Dental, Skin, and Electrical Departments; 2 p.m., Throat, Nose, and Ear Department. Daily: Operations, Medical and Surgical Out-patients at 2 p.m.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcement of Births, Marriages, and Deaths is 9s., which sum should be forwarded with the notice not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

DEATHS.

BRYETT.—On December 14th, at a nursing home, after a long illness, Lewis Thomas Fraser Bryett, M.D.Lond., Medical Officer of Health for Shoreditch.

SIMPSON.—On December 20th, 1927, at 16, Dumbarton Road, Brixton Hill (and late of Coldharbour Lane, S.E.), Dr. P. G. Simpson, beloved husband of Elsie Simpson.

Printed and published by the British Medical Association, at their Office, Tavistock Square, in the Parish of St. Pancras, in the County of London.

British Medical Journal.

SATURDAY, DECEMBER 31st, 1927.

THE PROTECTION OF MOTHERHOOD.

As noted in our last issue (p. 1198), a report by Dame Janet Campbell, entitled *The Protection of Motherhood*,[1] has just appeared from the Ministry of Health in continuation of her previous report on Maternal Mortality.[2] It analyses the figures and summarizes the progress of the four years between the two publications, and, being more constructive in spirit and less controversial in tone, should be the more helpful in pointing the way to a real advance. One of her conclusions is worth quoting, as it would appear to be her justification of, or apologia for, the effect of the maternal mortality report upon the practitioners of the country: "The reason for dwelling upon the tragedy of an unnecessarily high maternal mortality rate is not for the sake of criticism or censure, but because until it is realized that much of the poignant sorrow and suffering caused by misadventure at the time of childbirth is not inevitable and can be lessened, we shall be slow to find the time, money, effort, and goodwill needed to persuade all concerned to combine to overcome the practical difficulties of this problem. A convinced public opinion has magnificent driving force, and without it endeavour is apt to be half-hearted and to faint by the wayside."

The text on which this report is based may be found in its concluding paragraph—"It is only upon a foundation of healthy, happy, and contented motherhood that we can hope to build up a Nation sound in mind and body"—and its constructive character in this direction is indicated by the prominent place given to schemes for improving the maternity service and providing means by which supervision and assistance may be secured for every child-bearing woman during the ante-natal, natal, and post-natal stages. The recommendation of the Royal Commission on National Health Insurance that the scope of the maternity benefit should be extended is taken as the foundation on which a maternity service can best be built. Besides the cash payment on confinement, medical and nursing services should be provided and linked with the maternity services set up by the local health authority or by voluntary effort. As the personnel of these services would be largely family practitioners and midwives, it will be of interest to indicate the nature of the suggestions made in the report under consideration.

Doctors and midwives must be regarded, not as rivals, but as members of a team, each with their own part to play. The general supervision of the women during child-bearing will fall to the medical member, who will be responsible for the ante-natal examination of all his patients, and will retain directly under his care cases of complicated pregnancy or labour, or those in which difficulty in labour may be anticipated. The proposal of the British Medical Association and other bodies that provision should be made for attendance of a doctor and midwife at every confinement would usually mean that the normal labours would be conducted by the midwife, and medical aid only summoned for delay or complication. This arrangement is regarded with favour in the report, because it relieves the medical side of much unnecessary tax and yet allows experience of normal labour to the young practitioner so long as he wishes to avail himself of it. Besides managing many normal labours the midwife would perform all the maternity nursing. Supplementary services—such as hospital and clinic facilities, consultations with specialists, and skilled nursing—would be provided where necessary by the local authority, "in order that the standard of actual obstetric practice may be raised." With the object of attracting well educated and better trained women to practise as midwives, an increased appointment of municipal midwives is advocated. They should be allowed to do private practice and work in conjunction with private practitioners, but it is suggested that all fees earned in this way should be returned to the local authority. The disappearance of the independent midwife would be regretted, and the pious hope is expressed that some method may be found of bringing the competent private midwife into close association with the local authority, and enabling her to maintain her position in the maternity service.

A feature of this as of the previous report is the space devoted to puerperal infections as the largest single factor in the production of maternal mortality and disability. Though some reduction in the septic mortality rate occurred in the early years of the century, the last few years have shown a tendency in the opposite direction. A number of cases of outbreaks of infection in maternity institutions are analysed, with the object of illustrating the dangers of spread where puerperal women are congregated, and the importance of not neglecting early warnings of a focus of infection in an institution. An appendix on the bacteriology of puerperal pyrexia by Dr. Eastwood, the senior bacteriologist to the Ministry of Health, is included, and contains a summary of the application of bacteriological data to clinical practice. Dr. Eastwood is cautious and non-committal, and sets out clearly the reasons for the slow advance of bacteriology in close relation to clinical medicine. On the scientific ground that the data are as yet insufficient, he refuses to express any opinion as to the relative importance of exogenous and autogenous infection. The point that stands out most clearly is the need for further laboratory research in close contact with clinical cases of puerperal sepsis.

This report by Dame Janet Campbell should be carefully studied by the medical profession as a whole, for it indicates the growing tendency to bring private practice, alike of doctor and midwife, under the control of the local or central health bureaucracy. To the general practitioner it is particularly of interest in that it endeavours to answer two questions that greatly concern him in his maternity work—namely, "Is he getting the best possible equipment for this anxious and exacting work?" and "Can anything be done to relieve him of certain responsibilities and to enable him to concentrate his effort upon the essentially medical aspects of midwifery practice?"

[1] Reports on Public Health and Medical Subjects. No. 48. *The Protection of Motherhood.* By Janet M. Campbell, M.D., M.S. London: H.M. Stationery Office. 1927. 9d. net.

[2] Ibid. No. 25. *Maternal Mortality.* 1924. 1s. net.

SYMBIOTIC FERMENTATION.

MANY years ago it was shown by Marshall Ward that two micro-organisms living in close association may initiate changes which neither of them can produce when acting alone. This he observed in the case of the "ginger-beer plant"—the changes brought about by the conjoint action of a yeast and a bacterium in a saccharine fluid resulted in a preparation resembling ginger-beer, a result not obtained with either of the organisms acting alone. These observations of Marshall Ward have long been quoted as providing the classical example of microbic symbiosis. Nencki soon afterwards recorded the formation of normal butyl alcohol from glucose solutions by the combined actions of *B. paralactici* and *B. chauvaei*, neither of these bacteria in pure culture being able to produce this substance.

Interesting observations on the results of this close association or symbiosis of bacteria have been noted in the formation of various organic acids. Thus Sherman and Shaw reported that the yield of propionic acid by *B. acidi propionici* in lactose media was increased six or sevenfold by the addition of *Streptococcus lacticus* or *Lactobacillus casei* to the cultures. Again, during the great war acetone and butyl alcohol were produced on the large scale by the fermentation of cereals and other carbohydrates with *B. granulobacter pectinovorum*. It was noticed that a diminution or even complete absence of the formation of acetone with a rise in the production of lactic acid occurred, and this was found to be due to contamination of the cultures of *B. granulobacter pectinovorum* with Thaysen's *Bacterium volutans*. This result appeared to be due to an altered metabolism in the acetone-producing organism. A somewhat similar inhibitory action in the fermentation of lactose by *B. coli* was observed by Theobald Smith and D. E. Smith to be produced by the addition of paratyphoid bacilli, while a marked difference between the effects of hog cholera strains and those of paratyphoid bacilli was noted. All degrees of inhibition were observed, depending on the age of the cultures; living and functionally active bacteria, or those only recently killed, were necessary. It was suggested that the inhibitory factor was some metabolic product of the paratyphoid bacilli, probably of the nature of an enzyme.

Several studies of the biochemical characters of certain bacteria when living in association or artificially mixed and when living separately have recently been recorded by Castellani. This observer had noticed many years ago that ordinary baker's yeast, whether in Ceylon or in England, consisted, as a rule, of two or more organisms (saccharomyces and bacilli) living in symbiosis, and that in some cases baker's yeast gas-fermented a larger number of sugars than did any one of the isolated organisms. In recent years he has extended his investigations to include a study of the action of certain pathogenic germs in symbiosis with others. The same phenomenon has been observed in these cases also, and is described at length in his latest contribution to the subject, which appears in the *Journal of Tropical Medicine and Hygiene* for October 1st, 1927. These results have now been confirmed by Fiallos, Peruzzi, Menon, and others. An example of what Castellani terms the "symbiotic fermentation phenomenon," and which was termed "Castellani's fermentation phenomenon" by Fiallos in the same journal for December 1st, 1925, is afforded by the results he records with *B. typhosus* and *B. morgani* acting singly and combined, on each of the three carbohydrates maltose, mannitol, and sorbite. Acting on each of these three substances *B. typhosus* produces acid only, never gas, whilst *B. morgani* has no action on any of them, producing neither acid nor gas. Acting together, however, *B. typhosus* and *B. morgani* produce both acid and gas in each of these three carbohydrates. Castellani accordingly defines his "symbiotic fermentation phenomenon" as follows: "Two micro-organisms, neither of which alone produces fermentation with gas in certain carbohydrates, may do so when living in symbiosis or when artificially mixed." He further applied this phenomenon to the differentiation of certain organisms, particularly to those comprised in the dysentery group, and in the identification of certain carbon compounds, although in the latter case he admits that the mycological method of Castellani and Taylor is undoubtedly much simpler.

The latest contribution to this subject, from the pen of Ishikawa, appears in the *Journal of Infectious Diseases* for September, 1927. He discusses gas production by bacterial symbiosis, with special reference to the influence of nitrogenous substances, and finds that the non-proteolytic gas-forming bacteria alone cannot produce noticeable amounts of gas from carbohydrates and salts of formic acid in media containing only complex nitrogenous substances, such as milk, ascitic fluid, casein, nutrose, and gelatin, but that gas is generated intensively by these bacteria in such media if they are grown in association with the proteolytic bacteria, and demonstrable amounts of gas are produced if simple forms of nitrogenous substance—the digestion products of proteins, peptones, amino-acids, and ammonium salts—are added to such media. The formation of gas from carbohydrates by the associative cultures of two kinds of saccharolytic bacteria—an acid-producing organism and a gas-forming bacterium—does not take place markedly in ascitic fluid, casein, nutrose, and gelatin media, except under the following conditions: when a proteolytic organism is cultivated in association with the two saccharolytic bacteria; or when simple nitrogenous substances—peptone, amino-acids, and ammonium salts—are added to the media.

The part played by the proteolytic bacteria in the above mentioned cases appears to be that they pave the way for the fermentative activity of the saccharolytic bacteria by breaking down the protein of the media into some simpler forms of nitrogenous substances, which apparently are essential to the formation of gas. It seems probable that such simple nitrogenous substances accelerate the activity of the production of the specific enzyme, formiase, which is considered to be responsible for the production of the gas. The precise nature of this bacterial symbiosis has not yet been fully determined. The stage of growth and functional activity of the bacteria concerned, and the hydrogen-ion concentration with its regulation by the bacterial products, all appear to play important parts in obtaining the various results. As already stated, all degrees of the phenomena can be obtained, depending as they do on the character of the bacteria used, their age, and the employment of culture media of different composition. Further analysis of the gases produced may help to throw some light on the mode of action. There appears, however, to be good ground for believing that the acid- and gas-producing factors are different in time and probably depend on different endo-enzymes.

The further intensive study of these interesting phenomena is clearly indicated, and they provide a

wide field for exploration by the biochemist and physicist, whose labours would probably add much to our present scanty knowledge of the intimate metabolism of the bacteria.

PHYSIOTHERAPY FOR INFANTILE PARALYSIS.

IN the course of the fifth Congress of French-speaking Pediatricians, held at Lausanne last autumn, two papers on the treatment of infantile paralysis were read. One, by Dr. P. Duhem, dealt with physiotherapy, and the other, by Dr. P. Nicod, with orthopaedic considerations. According to H. Lemaire, who contributes a report of the congress to a recent issue of *Le Nourisson*, Duhem expressed the opinion that treatment by faradization was of very little value, and galvanism of the paralysed muscles often inadequate. Restoration of muscle function was better achieved by rhythmic galvanism, obtained by introducing into the circuit a metronome which interrupts the current at intervals of a second. This procedure was usually employed when the reaction of degeneration was not very pronounced, and might be used up to the point at which it elicited a maximal contraction. Bordier, in 1914, had advocated three exposures to x rays each month for a period of three months, the application being made at the level of the cervical or lumbar enlargement of the cord. Duhem suggested that irradiation acted here by destroying the inflammatory tissue and permitting recovery of the more resistant motor cells. He added that diathermy and local hot baths were also very effective in restoring the muscular response to stimulation by electric currents, but diathermy must be used with great caution, since burns were easily caused. One electrode, as large as possible, should be placed over the lumbar or cervicodorsal region, and the other on the affected limb. The temperature recommended for hydrotherapy was 100° to 112° F. Massage was only beneficial when the atrophied muscles had recovered functional power. Nicod, discussing orthopaedic treatment, insisted that immobilization of the paralysed muscles in the position of physiological relaxation was essential from the commencement; splints should be removed at regular intervals so as to allow massage and passive exercises and testing of the limb's voluntary function. When regression of the paralysis had ceased, operation might be required to correct deformity and permit fuller use of the limb. In Nicod's view the best surgical procedure is arthrodesis, with perhaps some tendon operation.

POPULARIZATION OF MEDICAL SCIENCE.

THE Harvey Society of New York was founded with the object of diffusing scientific knowledge of pathology and the allied sciences through public lectures given by actual workers in the subjects presented; the lectures were to be subsequently collected and published in a book. The *Harvey Lectures*[1] for 1925-26 include several of much interest, more especially one on the parathyroid glands by Professor J. B. Collip and another by Professor E. B. Wilson on empiricism and rationalism. The former is practically an essay on the whole subject of the parathyroids, but contains more particularly an account of experiments showing the action of the hormone on dogs, and the relation of the glands to calcium and phosphorus metabolism. Recent studies in parathyroidectomized rabbits indicate that the part played by phosphorus in tetany has not been sufficiently stressed. The inorganic phosphorus in these animals increases enormously after the removal of the parathyroid glands, and tetany of a marked type quickly develops, followed shortly by death. Injections of parathyroid hormone or even of calcium chloride may be of no avail in these cases when once the tetany has become manifest. The blood calcium is found to be lowered as in the dog and cat. In both these animals overdosage with the hormone is followed by urgent symptoms which are coincident with a falling calcium curve and a rising phosphorus curve, and it is probable that these symptoms are due more to the blood phosphorus change than to the high blood calcium which precedes the fall. The rise in blood phosphorus would therefore seem to be the natural danger signal of overdosage rather than the blood calcium value. Professor Wilson's paper deserves to be widely read; it deals with the limits of usefulness of the statistical method. He does not condemn the method (he is a professor of statistics), but he points out that mathematical conclusions may be weaker than the premisses on which they are founded, because of the accessory assumptions which are so apt tacitly to creep in. Any method, by the very fact that it is a method, may tempt persons to confide their fortunes to it, ending in their own destruction (a reflection suggested by the lecturer's proximity to Wall Street at the time. Moreover, the imagined beauties of their own speculations may lead them too far afield and prevent their ever finding their way back to nature. As germane to this topic he looks with some misgiving on the great elaboration of experimental apparatus in the hands of the young investigator, and suggests that such elaborate equipment may perhaps shield him from wholesome contact with the stubborn facts of nature. For the beginner he recommends less of the theoretical and quantitative and more of the concrete and qualitative. "If I knew a young fellow who sought advice about love, I should not send him to his room to study Balzac's *Physiologie du Mariage* or Bourget's more ponderous *Physiologie de l'Amour moderne*, nor yet to a clinic to be 'psyched' à la Freud; I should tell him to go and see some girls."

[1] *The Harvey Lectures.* Delivered under the auspices of the Harvey Society of New York, 1925-1926. Series XXI. London: Baillière, Tindall and Cox; Baltimore: The Williams and Wilkins Company. 1927. (Extra post 8vo, pp. 229; illustrated. 18s. net.)

PUERPERAL SEPSIS: ITS DEFINITION AND TREATMENT.

AMONG the papers read at the Royal Sanitary Institute's Congress at Hastings, and published in its *Journal* for November, was one by Dr. Remington Hobbs on some reasons for the high mortality and morbidity from puerperal sepsis. We publish this week (p. 1223) a further communication by Dr. Hobbs describing a method of draining the septic uterus. He objects to the definition of puerperal sepsis which was enunciated by the Ministry of Health at the suggestion of the Royal Society of Medicine—namely, "a febrile condition of the nature of wound infection arising after labour or abortion, due to bacterial invasion from, or absorption of, products of bacterial action from some portion of the genital tract." Dr. Hobbs told the Hastings congress that puerperal sepsis is not necessarily a febrile disease, and that the rest of the definition loses sight of the inflammatory changes which result from retained placental tissue, blood clot, and lack of free tissue drainage. It would appear, in fact, that Dr. Hobbs attributes puerperal sepsis to interference with the outflow of secretions from the tissues and cavities of the genital organs. He regards pain and tenderness as the cardinal symptom and sign of lack of free drainage from the uterus. He thinks also that much more attention should be paid to prolonged haemorrhage after labour or abortion. Holding these views, Dr. Hobbs regards all such procedures as curettage and swabbing with strong styptics or antiseptics as unsafe, and the injection of serums or vaccines as valueless unless accompanied by free drainage of the genital tract. Hence his adoption of the method of glycerin irrigation described in the article we publish.

THE JAMES MACKENZIE INSTITUTE.

THE continued progress of the James Mackenzie Institute for Clinical Research at St. Andrews is clearly indicated by the eighth annual report, which has just been issued. The Institute—which, it will be recalled, was established in October, 1919, for the purpose of studying disease with a view to its prevention—has been engaged since then in promoting active clinical research by general practitioners associated with specialists, and in the provision of courses of post-graduate instruction to facilitate and intensify such research. Financial assistance for specific investigations has been forthcoming from the Medical Research Council, which contributes also £500 towards the compilation of the Institute records. During the winter of 1926 a course of lectures, free to medical practitioners, was given by various experts on the blood pressure in health and disease; many of the lectures were subsequently published *in extenso*. It was not found possible to combine these in one volume, but it is hoped that this will be done in the case of the lectures delivered in 1927, of which reports have appeared from time to time in our columns among proceedings of medical societies. Papers on various subjects were read by members of the clinical staff of the Institute during the spring, and a post-graduate course was held during the last fortnight in June, which was attended also by students. Three volumes of reports have already appeared, and the fourth is in preparation. Considerable interest has been taken also in an attempt to correlate the public health activities of the local authority with the work of general practitioners. Special study is being carried on at the child welfare centre with reference to the first two years of life, and valuable records are being obtained illustrating such subjects as the significance of albuminuria, oxaluria, and acetonuria in childhood; the frequency and prognostic significance of recurrent ailments such as bronchial catarrh; and the effects of environment upon the health of growing children. Recent gifts to the Institute include a recording ophthalmoscope, and additions to the library have been received from the Mayo Clinic and the Rockefeller Institute.

RELATION OF PHYSIQUE TO MENTAL ACTIVITY.

A NEWSPAPER, in summarizing the lecture delivered recently to the Royal Anthropological Institute by Dr. A. A. Mumford, medical officer of Manchester Grammar School, misquoted him as upholding the view that "the better the scholar the better the athlete," and thereby started a correspondence in its columns from headmasters and others who declared against this supposed contention by Dr. Mumford, and said that in their experience excellence in both aptitudes was rare. But the argument in Dr. Mumford's lecture, the full text of which we have had the opportunity of studying, is much too carefully balanced to be adequately summarized by saying that he claimed any close connexion between "brain and brawn"—"brain" in this instance meaning good scholarship, and "brawn" the development of the larger muscles. His purpose was to appeal for a fuller study of the differences observed among growing boys, both in mental attainments and in power to excel in physical activities. A detailed inquiry which has been proceeding over a period of years at Manchester Grammar School has revealed a slight positive relation—not a close connexion—between the physical and the mental aptitudes. The physique both of the scholarly and of the athletic boy tends to be superior to that of the average boy, and also the better scholars tend to have a better physique than the scholars less distinguished. In both cases the superiority appears to lie, not in muscular development, weight, and so forth, but in better breathing capacity and the improved body-build which results. These conditions of function and structure enable the boy to endure the stresses involved in hard mental as well as hard physical activity. Dr. Mumford gave an interesting account of the annual body measurements which have been taken at Manchester Grammar School for over forty years, but especially since 1921, when a new system of grading was established. He was led to consider from a new point of view the common division of bodily exercises into those of strength, endurance, agility, and speed—namely, that of the different forms of body-build which are required for various excellences, and all of which may be comprehended in the term "physical fitness." He sees a danger if that term is taken indiscriminately, as a general certificate of security against disease or a guarantee of health. Physical fitness may be of more than one kind. The Medical Research Council did not succeed in its effort to apply to all forms of physical activity the Air Force physical efficiency tests, and Dr. Mumford, while he has found these same tests of great value when considering various forms of physical activity among schoolboys, has not expected to find any single test or group of tests to apply to all such forms. The school medical officer, he thinks, should appreciate how wide are the differences in the desired physical equipment for different individuals, having regard to their present school life and their anticipated career. He should not only make a routine physical examination by measurements and tests, but should compare the results of such examination with the boys' mental progress as reported by the masters. Class work in school calls for the activity of the same bodily organs and to some extent the same tissues as do physical exercises, though, of course, in a different way and to a different degree. Although undue absorption in either mental or physical activity involves damage to the powers thus over-stimulated and danger from under-development of the powers neglected, yet the proper exercise of physical powers is not only quite compatible with, but probably very beneficial to, the cultivation of mental powers. Dr. Mumford proceeded to give the results of an inquiry extending over twenty years upon a number of boys who gained entrance scholarships at Oxford or Cambridge, for the most part in open competition. The results again went to show that there was a general tendency for those boys who were accelerated in school progress to show acceleration also in physical robustness, particularly in the rate at which they acquired fuller respiratory power. These scholarship-winning boys tended to display an accelerated physical growth compared with the average boy. That they also possessed a slightly better physical frame was shown by the fact that the acceleration in the growth of chest girth—and therefore in breathing capacity—was rather ahead of the acceleration in respect to height and weight. This greater relative acceleration of chest girth also was most pronounced among the 102 boys of the group who obtained first-class honours in one or both parts of the subsequent university examinations, as distinct from the 113 whose honours were of the second or third class, and Dr. Mumford thought this indicated that these boys were capable of maintaining a higher level of working capacity with less strain than others as a result of the combination of higher mental ability with superior physique. An attempt was also made to find out whether this total of 215 scholarship-winning boys, besides displaying energy which could be directed towards successful study, also possessed in any marked degree the energy which could be utilized in physical activity—that is, whether, taking the group as a whole, they showed special excellence in games and sports. The records were examined for awards of colours for prowess in games or success in athletic contests, and it was found that out of 700 prizes competed for by 7,000 boys, 73 had been taken by members of this group of 215 boys who also possessed special mental ability. Here

again the greater the degree of mental excellence as judged by the honours obtained at university examinations, the greater the degree of physical excellence as judged by the awards. Thus one boy in four in the first-class group, one boy in five in the second-class, and one boy in nine in the third-class were awarded colours. Moreover, in the first-class group nine of the boys showed special prowess in more than one form of physical activity, while in the second-class and third-class groups only two of the boys gained a similar distinction. In conclusion, Dr. Mumford again pointed out that these investigations revealed tendencies only, but they went to support the results of other observations in suggesting a certain association between activity of the body and activity of the mind, and in making it plain that the growth of the human frame should be viewed as a unity, and not as growth of mind or body separately.

NEW YORK MENTAL HOSPITALS.

WITH a prospect of amending lunacy legislation in this country, there is some interest in noting the progress of asylum administration in other countries. In the State of New York the mental hospitals are managed by the State Hospital Commission. The commissioners are three, two laymen and one doctor, and their last annual report informs us that, by a law passed in 1926, this work, together with the control of some other hospitals and supervision of mental defectives, is to be placed under the control of a Department of Mental Hygiene, with a single head, the Commissioner of Mental Hygiene, who is appointed by the governor of the State and retires with the governor. The department will have three divisions—of mental disease, of mental deficiency and epilepsy, and of prevention, each with its assistant commissioner. The old commission controlled some 45,000 beds and treated 56,751 patients in the last year, at a cost of four million pounds sterling. One-tenth of the total number were paying patients; the rest were paid for by the State. During the year 4,526 were discharged—1,771 as recovered, 942 as much improved, 1,017 as improved, 718 as unimproved, and 78 as not insane. The recovery rate on first admissions was 24.3 per cent., and on the total number of persons under treatment 3.3 per cent.; 1,465 patients were transferred elsewhere. There is a medical examiner's office, and the chief duty of this officer appears to be to send back to their home country aliens who are insane, and to transfer others to States of the Union whence they come. His work is described as efficient: last year 458 aliens were got rid of, and 758 non-residents were sent to their homes outside the State of New York. Admission appears to be by several methods. Voluntary admissions numbered 502; of these 221 were readmissions; 77 of these cases were later committed. One hundred were admitted on verified petition and physician's certificate. Twenty physician's certificate cases were committed. Fifty-one mental clinics are conducted by the several State hospitals, with an aggregate of 17,000 visits. It was hoped to have extended the clinic work to include school children with disorders of behaviour, but full co-operation of the educational authorities could not be secured. The medical inspectors made fifty-eight visits to the hospitals, and saw some 8,000 patients. "All were accorded the privileges of the insanity law and given an opportunity to express themselves and their reasons for being there. Any requesting it were given a private interview. Thirty-four patients made complaint of ill treatment, but full investigation did not elicit anything to substantiate the complaints made. Twenty-six committed patients protested their commitment and detention, but in practically all of these a short interview and examination of the case history showed clearly the need of State hospital care." Visits are also made to hospitals for criminal cases, to private licensed institutions, and to non-licensed institutions. The Commission maintains a school for mental nurses, and in this connexion note is made of the lamentable decline in the number of pupil nurses, a lack which necessitates the substitution of trained attendants for nurses in the hospital wards.

HISTORY OF THE CLINICAL THERMOMETER.

IN *Medical Life*, described as "the merger of six medical journals," one of which was the *Medical Quip* and another the *Medico-Historical Bulletin*, in whose footsteps—possibly a better path—it appears to follow as regards its subject-matter, Mr. C. J. S. Thompson[1] traces the history and development of the clinical thermometer. In 1638 Sanctorius constructed one and advocated its use in the diagnosis of disease, correlating variations in body temperature and weight, and thus was much in advance of his time as seer of metabolism. M. du Val of Paris invented a clinical thermometer which was first shown in England at a meeting of the Oxford Philosophical Society on May 13th, 1684; it was three inches in length and three or four lines in diameter, the central tube for the mercury being half a line in diameter; it was used in fevers. Boerhaave's pupil van Swieten used Fahrenheit's mercurial thermometers for registering the mouth and axillary temperatures; De Haen made further observations, such as morning and evening fluctuations and the high level during a rigor; Fordyce, Blagden, Banks, and Solander experimented on themselves in heated chambers, and in 1780 Lavoisier and La Place, working on thermometry, showed the dependence of animal heat on the combination of oxygen with hydrogen and carbon. John Spurgin, physician to the Foundling Hospital, Harveian Orator, and a follower of Swedenborg's philosophy, published in 1852 an account of a clinical thermometer, John Davy in 1863 brought out his observations made in many parts of the world, and in 1868 C. A. Wunderlich's essay, based on observations of twenty years (translated in the New Sydenham Library in 1871), gave a real stimulus to clinical thermometry, though Aitken had used thermometers in English hospitals in 1866, and Sidney Ringer in 1865 had published a work on *The Temperature of the Body as a Means of Diagnosis of Phthisis, Measles, and Tuberculosis*. As is (or should be) well known, the late Sir Clifford Allbutt devised the present form of clinical thermometer, first fitting it, when six inches long, into a stethoscope, and finally, about 1867, reducing it to three inches in length.

ROYAL SOCIETY OF MEDICINE.

AT the reception to be held by the Royal Society of Medicine on the evening of Monday, January 16th, Dr. Jane Walker will give an address entitled "Saints, Medicine, and Surgery." The Wellcome Historical Medical Museum is providing a series of interesting exhibits, including statues of saints to whose intercession cures of various ills have been attributed, and also *ex voto* offerings to those saints, and to Grecian and Egyptian deities credited with similar powers. Dr. Jane Walker has secured reproductions of many old paintings illustrating her subject, and in her search for material has had access to the catalogued collection of pictures in the possession of Sir Robert Witt (Trustee of the National and Tate Galleries). On this occasion guests will be received by the President from 8.30 to 9 p.m. as usual, but the address will be given at 9.15, instead of 9.30 as hitherto. Admission to this social evening is open to Fellows of the Society and their friends, but tickets are necessary for visitors if unaccompanied by Fellows.

[1] *Medical Life*, New York, 1927, xxxiv, 510.

Union of South Africa.

[FROM OUR CORRESPONDENT IN CAPETOWN.]

NEW HOSPITAL REGULATION: CAPE PROVINCE.

A REGULATION (framed under Section 72 of the Cape Hospitals and Charitable Institutions Ordinance of 1912) governing the attendance on patients in hospitals by medical practitioners not on the staff was published recently in the *Provincial Gazette*. The regulation reads:

(1) Subject to the provisions of sub-paragraph (2) of this regulation:

(*a*) Any registered medical practitioner who is not on the staff of the hospital desiring to attend patients paying three shillings and sixpence per diem or over towards their maintenance shall apply to the board for permission so to do, and no such practitioner shall have access to the hospital for the purpose of so attending patients until he has received the approval of the board thereto in writing.

(*b*) If in the opinion of the board the grant of such permission to any such practitioner is likely to cause administrative difficulties in the working of the hospital the board may refuse the application or may grant it in respect only of a specified part of the hospital.

(*c*) If in the opinion of the board any medical practitioner to whom such permission has been granted has caused administrative difficulties in the working of the hospital or in any portion thereof the board may revoke its permission, and thereupon such practitioner shall have no right to attend patients in the hospital.

(2) Notwithstanding anything in this regulation contained, no permission as aforesaid shall be refused or revoked by the board or shall be granted to a medical practitioner to attend patients in a specified portion of the hospital only, without the previous sanction of the Administrator.

Since the publication of the above-mentioned regulation a controversy has arisen in respect of its interpretation. The regulation lays down that before a doctor who is not on the staff of a hospital may attend a fee-paying patient at that hospital he must apply for permission to the hospital board, which, with the consent of the Administrator, may refuse to grant him permission if, in its opinion, the doctor in question "is likely to cause administrative difficulties in the working of the hospital." In view of the recent trouble at Mafeking, reference to which was made in the BRITISH MEDICAL JOURNAL for June 11th (p. 1078), one interpretation placed on this clause is that it is designed to apply what virtually is a colour bar. In the public press an attack has actually been directed against the Administrator of the Cape Province for taking what are alleged to be autocratic powers in order to defeat the old traditions against discrimination on the grounds of colour. Interviewed by a representative of the press as to the views of the medical profession on the subject, the President of the Cape Western Branch of the Medical Association of South Africa (British Medical Association) stated: "As a matter of fact the profession opposed the draft ordinance originally proposed by the Administrator, as we felt strongly that it was entirely a wrong principle to make any discrimination against a doctor who has been fully trained and licensed, for any reasons which could not be defined clearly. Then the whole matter was carefully considered by the Federal Council of the Medical Association of South Africa at Durban, which passed the following resolution and formally transmitted it to the Administrator:

"'The Council is of opinion that it is eminently necessary that boards of public hospitals be empowered to withhold the privilege of attending upon patients in the hospital—or specified portion thereof—from any person, when, in the opinion of the board, or that of an official duly authorized thereto by a resolution of the board, such attendance might result in, or be likely to cause, difficulty in the efficient administration of the hospital. The practitioners from whom the privilege of attendance on patients is so withheld shall, however, have the right to appeal to the provincial administrator, whose decision shall be final.'

"It will thus be seen," pointed out the President, "that the Administrator is really carrying out in effect the recommendations of the Medical Association. In fact, we found him extremely willing to meet the views of the medical profession as far as lay in his power. All that this regulation insists upon is that any person who by his action causes administrative difficulties may, if it is considered necessary, be deprived of the privileges of the hospital. It does not refer to a colour bar at all." As far as the Mafeking Hospital is concerned, following the gazetting of the new regulation, all the members of the staff applied for permission to attend their patients as laid down by the amended ordinance, with the sole exception of the native practitioner whose action originally brought about what was virtually a strike on the part of the nursing staff of the hospital. More recently, however, the native practitioner in question has made application to the Mafeking Hospital board for the necessary permission, but this, it is understood, has been refused. What the outcome of this latest development will be remains to be seen, but there would appear to be no redress for a practitioner thus refused permission unless the ordinance is held to be *ultra vires* by a court of law.

PRESENTATION TO DR. A. MARIUS WILSON.

After close on thirty years in the service of the railway administration as medical officer at Capetown, Dr. A. Marius Wilson recently retired on reaching the age limit. As a token of appreciation on the part of the members of the railway sick fund of services rendered over so long a period a presentation was made to him to mark the occasion. This took the form of a bookcase, a chair, a writing desk, and an inkstand. Mr. Potter, assistant general manager, South African Railways, in making the presentation, assured Dr. Wilson that they all very much regretted losing him, for at all times he had proved himself to be a faithful adviser and friend. While always sympathetic to the genuine sufferer, woe betide the malingerer, who got very short shrift from him. Mr. Coppin, nominated member of the sick fund board, associated himself with Mr. Potter's remarks, while Mr. McDowell, secretary of the board, and Mr. McMillan also spoke. Dr. Marius Wilson, in expressing his thanks for the handsome gifts, found it difficult to put in words his appreciation of the spirit which had prompted the presentation. He related reminiscences which recalled incidents taking place at different times during his thirty years' work amongst the railwaymen of the Union. This period he would always look back upon with the happiest of thoughts. His only regret was that so many of the old faces had passed away. In addition to those mentioned as being present at the ceremony were Drs. Jones, Dreyer, Charnock, Johnston, Lawrie, and Creux, colleagues of Dr. Wilson, as well as the majority of the officials and elected members of the sick fund board.

UNION OF SOUTH AFRICA: CENSUS 1926.

The census figures recently published by the Office of Census and Statistics show that the European population of the Union in 1926 amounted to 1,676,660, comprising 819,742 males and 856,918 females. This represents an increase of 157,172, or 8.31 per cent., during the five years since the last census, taken in 1921. The preponderance of females over males has been reduced from 94,000 in 1911, and 45,000 in 1921, to 37,000 at the present time. Almost one-half of the population are under 21 years of age—thus of females 404,988 are under and 451,930 over 21 years of age; of males 393,656 are under and 426,086 are over 21. The number of males and females alive at the age of 75 and over is almost equal, there being 8,043 males and 7,990 females, but the number of married women is only 1,529, compared with 4,784 married men over the age of 75. The total number of married men shown by the census is 307,250, while there are 305,346 married women. The number of widows, however (45,340), is nearly three times the number of widowers, which is only 16,810. Taking the married by age periods, it is seen that of males only 194 appear between the ages of 15 and 19, whereas in the same age period no fewer than 4,990 females had entered into matrimony. Three women had married at ages between 10 and 14 years. Between the ages of 25 and 29, 27,640 men are recorded as married, as compared with 43,964 women. Between 30 and 34, 43,074 men and 49,312 women were married. The number of married males reaches its zenith between 35 and 39 (44,565), during which period 8,531 appear as unmarried. At 65 to 69 years of age, 11,520 men were married and 1,286 not married, and in the same period 6,401 women were married, which number

approximates to the 6,644 married males between the ages of 70 and 74. Divorces among men are first recorded in age period 20 to 24, when 26 appear, but the figures soon increase, there being 178 men divorced of ages between 25 and 29. The peak is reached with 428 divorces among men between 45 and 49 years of age. The total number of divorced men in the census is 2,576, compared with 2,667 divorced women. Twelve women of ages between 15 and 19 are set down as divorced, the peak figures being reached among women with 441 at 30 to 34 years of age, 420 at 35 to 39 years, and 401 at 40 to 44 years.

Medical Association of South Africa (B.M.A.) Cape Western Branch: Special Country Meeting.

During the past year or two the programme for the session of the Cape Western Branch of the Medical Association of South Africa (British Medical Association) has included a clinical meeting at some centre in the country districts. In 1925 the inaugural meeting of what promises now to be an annual event took place at Paarl and was attended by a very large number of members, those from Capetown predominating. In 1926 Malmesbury was the venue, and once again a most successful meeting, both in point of number of members present and quality of the contributions made, had to be recorded. These meetings are proving themselves of value in more ways than one. Not only is opportunity given for town and country members to meet on common ground, when matters of mutual interest can be discussed, but the social side, also, is not neglected; new friendships are formed, and as often as not old ones renewed. From the point of view of the townsman, confined to his consulting room day after day, such an outing is an event to be looked forward to, affording him as it does a chance of becoming more familiar with the rural districts whence come so many of his patients.

This year the Annual Country Meeting took place at Somerset West, a prosperous town situated close by the shores of False Bay, some 33 miles from Capetown, on the evening of Friday, October 7th, 1927. Prior to the clinical meeting the members of the Association present were entertained to dinner by the officials of the Cape Explosive Works, Ltd. Some sixty members and friends sat down to dine in the commodious recreation hall belonging to the works, under the chairmanship of Dr. Gutshe, principal chemist to the company. A guest of honour present was Sir George Cory, official historian to the Union Government, while all the local medical and dental practitioners were invited as guests of the company. After the customary loyal toasts had been duly honoured the guests were welcomed by the chairman in a well chosen speech. Mr. T. Lindsay Sandes, vice-president of the Cape Western Branch of the Medical Association, who deputized for the president, Dr. James Luckhoff, unavoidably prevented from being present, responded on behalf of the guests in his usual happy manner. Among others who spoke were Sir George Cory, whose after-dinner oratory is always delightful; Professor W. A. Jolly, Dean of the Faculty of Medicine in the University of Capetown; and Mr. G. C. Scully. The dinner concluded, an adjournment was made to the meeting hall, where several interesting cases were shown by Dr. Griffiths, medical officer to the Cape Explosive Works, and Dr. Isaacson, a local practitioner. Some very useful discussion followed, concluding the business of the evening. Although many members were compelled to return to Capetown the same night, not a few remained until the following day, and were well rewarded for their trouble in so doing. The morning was spent in a visit to the estates of Lourensford and Vergelegen, the properties of Mr. J. W. Jagger and Sir Lionel Phillips respectively; at the last-named place members and their wives were entertained to tea on the picturesque terrace of the old Dutch homestead. The afternoon was occupied by a tour of inspection to the Steenbras Waterworks, the vast undertaking of the corporation of the city of Capetown lately completed, where the main reservoir, formed by building a retaining wall across a narrow mountain gorge, extends for some miles up the valley and impounds 6,000,000,000 gallons of water. The latter, after filtration, is conducted by two great pipe lines to the city, a distance of over forty miles, and serves the needs of a population which at the present time numbers close on 300,000. Great credit is due to Dr. Griffiths, who was responsible for arranging so instructive and enjoyable a programme. There is little doubt but that after the experience of the past three years these country meetings will become annual events in the activities of the Branch.

India.

Travelling Dispensaries in the Central Provinces and Berar.

Adverse climatic conditions during 1926 in the Central Provinces and Berar resulted in an increased mortality due to various diseases, particularly plague, cholera, and malaria; tuberculosis increased, and more sanatorium accommodation appears to be necessary. Lieut.-Colonel H. G. Stiles Webb, I.M.S., in his annual public health report, comments on the valuable services rendered by travelling dispensaries in militating against these and other diseases, often under very difficult conditions. Twenty-nine of these dispensaries were at work during the year, and visited 6,216 villages, treating nearly 104,000 patients, the majority of whom were suffering from malaria, diseases of the digestive and respiratory systems, and skin and eye troubles. In addition to 26,000 antiplague and 8,000 cholera inoculations, 1,418 minor operations were performed and 51,000 school children were examined. The vaccination and vital statistics were checked in the different villages visited, and reports were prepared on the local water supplies and general sanitation. Many public lectures were given, particularly on child welfare, and the prevention of plague, cholera, small-pox, and malaria; a special effort was made to check the prevalent evil of opium administration to infants. Commenting on the public health work in this part of India, Lieut.-Colonel Stiles Webb expresses the opinion that helminthic infection is very common; in the case of hookworm he puts the incidence at 20 per cent., while that of roundworm is 15 per cent. He emphasizes the urgent need of establishing a public health institute which could take up the study of this infection and advise also as to the best lines of attack on the very high infant mortality rate, which compares unfavourably with other parts of India; the institute might also take up the study of tick typhus and intestinal infections. Plague appears to be becoming endemic in Jubbulpore, and the local circumstances favouring this need investigation. Collaboration between the public health and veterinary services is advocated with a view to the elucidation of such matters as the relation between tick diseases in man and animals, and also the spread of tuberculosis.

Medical Progress in Bhopal.

The new Prince of Wales Hospital in Bhopal was opened on October 31st by the Begum, accompanied by her son, the present Nawab. The pre-existing hospital was opened in 1878, when the average daily attendance was about ninety-three; it has gradually expanded since that time and gained in popularity, the present daily attendance having risen to over 500, and an annual grant being received from the State for its maintenance. The Begum has always taken a very active interest in the work of the hospital since its institution, and contributed generously towards the provision of the new building, which has been erected by the Public Works Department of the State of Bhopal at a cost of about £30,000. The hospital includes an up-to-date operating theatre, well equipped wards for patients, an *x*-ray plant, with a complete electrotherapeutic apparatus, and a good bacteriological and pathological laboratory. It is hoped to add departments for dentistry, ophthalmology, and oto-rhino-laryngology in the future. At the opening ceremony the Nawab appealed for continued and increased financial support; he referred particularly to the need of providing a ward for paying patients, and to obtaining an expert medical staff. Other schemes under contemplation for the improvement of medical facilities throughout the State include a supply

of filtered water for the city of Bhopal, provision of medical relief in outlying areas, and more active steps for the prevention of malaria.

PREVENTION AND TREATMENT OF BLINDNESS IN BOMBAY.

The Blind Relief Association, which came into existence at Bombay at the beginning of 1919, has recently issued its report for 1926, which indicates the extent and variety of its ideals and activities. Educational work includes lectures and the distribution of literature on the nature and prophylaxis of eye diseases; dispensaries are established for treatment, which is provided free of charge to destitute people. In the case of total blindness special training is given with a view to obtaining employment. Trained inspectors travel systematically throughout the presidency of Bombay in order to detect and treat conjunctivitis in children or ophthalmia neonatorum. Operable cases of ophthalmic diseases are sent to hospital or are given treatment locally; spectacles are provided without charge to the poor. An industrial home for the blind is maintained in Bombay. In the year 1926 over 44,000 patients were dealt with by the association, and 6,600 operations were performed. It is calculated that nearly 13,000 children were saved from blindness by prompt treatment. During the period between its inauguration and the end of 1926 the Association has helped nearly half a million patients, and various details of its work at the different centres are given in the report.

CHOLERA AT HARDWAR FAIR.

The value of prophylactic inoculation against cholera is fully recognized, and Sir Leonard Rogers urged its adoption on the large scale in connexion with the famous fair at Hardwar in the United Provinces of India, contending that if mass inoculation was neglected a cholera epidemic might break out and possibly spread to Europe. At the tenth session of the Health Committee of the League of Nations, at which the question was discussed, Colonel Graham explained that, while concurring as to the value of mass inoculation, he considered that at Hardwar, from the administrative point of view, it presented serious difficulties. The Government of the United Provinces had spent £32,000 in preparatory work, sufficient to deal with a million pilgrims on a single day. The standing hospital had been augmented and new temporary hospitals provided, together with travelling dispensaries, inspection posts, and first-aid stations. No pilgrim had any excuse for drinking bad water; the pools by the river were fenced with barbed wire, and the good piped water supply had been supplemented by 300 tube wells along the line of processions. The sacred water in which bathing took place was chlorinated. According to the last reports received, while cholera had occurred in Hardwar, there had not been a single case of infection of a resident. Cholera vaccine had been offered to intending pilgrims in the surrounding districts. Inspection, good water, and propaganda were the methods adopted by the administration, and it was believed that they would meet requirements, whereas compulsory mass inoculation might lead, as on certain previous occasions, to excitement, rioting, and bloodshed. Colonel Graham said that Sir Leonard Rogers had subsequently expressed satisfaction with the precautions taken, which he thought would go far to avert the danger from Hardwar. The episode reflects in an interesting manner the complex nature of the sanitary problems of India. Our administrators there are properly alive to the risks of imposing remedies, even though salutary, upon populations unprepared to receive them. Such procedure before now has stimulated reaction, and delayed, instead of advancing, sanitary progress, both in India and elsewhere.

England and Wales.

NEW GRADE OF MENTAL HOSPITAL ASSISTANTS.

THE Mental Hospitals Committee of the London County Council is proposing to form a new grade of attendants upon insane patients at mental hospitals. These will be men and women who need not have the special qualifications which nurses are required to possess, and will not be called upon to accept the responsibility for nursing care in the strict sense which devolves upon qualified mental nurses. They will, however, be persons of proved fitness, temperamental and other, for association with the insane, and will be competent, under the supervision of trained nurses, to have the care of certain types of mental cases which do not require skilled nursing. They will be known as "hospital assistants," and it is thought that their numbers should not be more than 20 per cent. of the nursing staff. The commencing rate of remuneration of the new grade will be the same as that of probationer nurses, but the first increment will not be given until the completion of three years' service, and will depend upon the employee's efficiency in first aid. In no event will they be put permanently or temporarily in charge of wards by day or night. The proposal that such a grade be created was made in the first instance by the Departmental Committee on Nursing in Mental Hospitals, and was afterwards endorsed in the report of the Royal Commission on Lunacy and Mental Disorder.

ROYAL ALBERT INSTITUTION, LANCASTER.

Open-air verandahs have been constructed at the Royal Albert Institution, Lancaster, in the course of the last few years, and during the last twelve months a most useful one has been placed on the south side of the girls' wing, providing accommodation for open-air meals, instruction classes, and games. An artificial sunlight apparatus has been installed in a room in the tuberculosis home. The Royal Albert Institution, which was established in 1864 for the improvable feeble-minded of all classes in the seven northern counties, has found the pressure on its accommodation very great during the past year. Since its commencement 4,370 patients have been admitted, many of whom have been considerably improved, and about 10 per cent. have become practically self-supporting under friendly supervision. It is subject to inspection by the Commissioners of the Board of Control and by deputations from boards of guardians and local authorities, under the Mental Deficiency Act. The sixty-third annual report, which has recently been issued, contains a detailed account, with pictures, of the valuable work that is being carried on. The institution, which is situated about a mile from Lancaster, is supported by voluntary contributions, and there is accommodation for paying patients.

SWIMMING BATH DISINFECTION IN ECCLES.

Disinfection of the public swimming bath in Eccles, which contains 63,000 gallons of water, is effected by passing the water daily through two filters; it is then returned to the bath after aeration and warming to 75° Fahrenheit. The surface of the water is skimmed each morning and the sediment removed from the floor of the bath. In his annual report for 1926 Dr. J. E. Spence, medical officer of health for Eccles, states that the bath was last filled in January, 1923, a small quantity of water having been added each day to replace wastage; since this date the bath has been used by over 200,000 bathers. Bacteriological examinations are made four times a year; samples of the water taken in February and June were almost sterile, but those examined in August and November were not so good, owing to some of the cones at the base of the filters being defective. At the beginning of the present year a swimming bath was opened for women; it contains 46,000 gallons of water.

QUEEN'S HOSPITAL, BIRMINGHAM.

Reference was made in this column on November 26th (p. 1004) to the opening of the new surgical block of Queen's Hospital, Birmingham. Five beds in the new extension have been endowed by the Birmingham City Police Force, the Halford Cycle Company, Messrs. Joseph Lucas, Mr. W. J. Adams, and the honorary medical and surgical staff of the hospital. These beds were formally dedicated by Sir Charles Hyde, president of the hospital, on December 13th, and during the proceedings it was announced that the employees of Messrs. Davenports had given the money to endow another bed. The debt on the extension has been very materially reduced by these gifts to about £12,000.

Scotland.

GYNAECOLOGY APPOINTMENTS IN EDINBURGH.

DR. JAMES HAIG FERGUSON who, on December 15th, retired under the age limit from charge of wards in Edinburgh Royal Infirmary, was on December 19th elected by the managers to the post of consulting gynaecologist to the Royal Infirmary. Dr. Haig Ferguson had acted as house-physician to the institution in the year 1884-85. In 1906 he became a member of the honorary staff as assistant gynaecologist, and in 1921 he was promoted to the charge of wards. A record of the invaluable services which he had rendered to the Royal Infirmary was minuted. Dr. Hugh S. Davidson was appointed to charge of wards in succession to Dr. Haig Ferguson, and Dr. Douglas Miller, F.R.C.S.Ed., was elected to the vacant post as assistant gynaecologist to the institution. At a meeting of the board of Edinburgh Royal Maternity and Simpson Memorial Hospital, Dr. Hugh S. Davidson was appointed ordinary physician to this institution in the room of Dr. Haig Ferguson, who had retired under the age limit, and who was appointed honorary consulting obstetrician to the hospital. The directors of the Chalmers Hospital have appointed Dr. Douglas Miller gynaecologist to the hospital to fill the vacancy caused by the retiral of Dr. Davidson on his appointment to the Royal Infirmary; and the board of management of the Deaconess Hospital has appointed Dr. E. F. Fisher, F.R.C.S.Eng., as gynaecologist to this hospital in succession to Dr. Davidson.

LONGMORE HOSPITAL.

The annual meeting of the Royal Edinburgh Hospital for Incurables was held in the Longmore Hospital, Edinburgh, on December 8th. The report showed that the average daily number of patients under treatment had been 265 during the past year. The ordinary income for the year had been £12,563, and the ordinary expenditure £20,209, constituting a debit therefore of £7,646, which had been met out of capital. The average cost per occupied bed for the year had been approximately £89, as against £85 for the preceding year, the increase being mainly explained by the fact that the coal bill had been higher by £1,032 than in the preceding year, while the increase in the cost of food had been only £81. The hospital had, to a great extent, relieved the general hospitals by admitting cases of incurable disease which were in urgent need of hospital treatment, but which could not be retained indefinitely in the general hospitals. The chairman, Sir Henry Cook, moved the adoption of the report, and appealed for increased subscriptions to the hospital. The Very Rev. C. L. Warr, who seconded the motion, said that those of them who saw from week to week the difficulties that were entailed by protracted illness in small and congested houses could faintly realize something of the benefit that this hospital conferred upon the hundreds who found shelter and care within its gates. It should be realized further with gratitude that many diseases, thanks to unwearied investigation, were being removed from the category of incurable disease. This hospital was an institution of which the city ought to feel proud, and he was sure it would never lack support and practical encouragement from the citizens.

GLASGOW WESTERN INFIRMARY.

The annual meeting of Glasgow Western Infirmary was held on December 22nd. Colonel J. A. Roxburgh, chairman of the board of managers, presided. The chairman stated that the financial figures for the year just past were very much the same as those for the previous year, the ordinary expenditure being approximately £83,000. The legacies, amounting to about £21,800, were about £7,000 less than in 1926. An appeal had been made to the subscribers to increase the ordinary income so that the deficit between it and the ordinary expenditure might be materially reduced. It was announced that the David Elder Infirmary at Govan would be ready as an auxiliary hospital for patients early in 1928, and this would bring a measure of relief to the pressure which had been felt in the Western Infirmary for many years. The prizes and medals gained by the nurses for examinations were distributed by Mrs. David Mason, wife of the Lord Provost of Glasgow.

DIPHTHERIA DEATH RATE IN EDINBURGH.

A table has been published showing the number of deaths from diphtheria in the city of Edinburgh for the years from 1894 to 1926. In 1894 the deaths from this cause totalled 141, but the number gradually decreased till 1908, when there were only 23 fatal cases. Thereafter deaths rose somewhat, so that in 1912 there were 31 deaths, in 1914 97, and in 1915 117 deaths. During the next ten years the number fluctuated between 60 and 80. In 1925 it was 84, and in 1926 fell to 43. As the population of the city was increased by about 100,000 in 1920 owing to the expansion of the city boundaries the figures since that year represent a very considerable diminution. The majority of the fatal cases during the period of thirty years have been mainly in children under 5 years of age, and very few deaths over the age of 15 years have been recorded.

QUEEN VICTORIA'S JUBILEE INSTITUTE FOR NURSES.

The annual meeting of the Scottish branch of the Queen Victoria's Jubilee Institute for Nurses was held in the City Chambers, Edinburgh, on December 19th. Lord Provost Stevenson presided, and remarked that in the preceding year 102,000 cases had been nursed by members of this institute in Scotland. These cases had involved 1,872,000 visits. He regarded it as a great achievement that in these days of dull trade and unemployment £80,000 should have been raised in Scotland for the Queen Alexandra Memorial Fund to augment reserves of this institute. Dr. Thomas F. Dewar, C.B., of the Scottish Board of Health, in moving the adoption of the report, spoke of the gradual evolution in the standard of nursing during the past forty years. There was at present in progress in Scotland a considerable change in the relations of the associations which dealt with maintenance of health and the welfare of the sick. A process of evolution was going on almost without legislation. The organization in some counties was, however, far ahead of what it was in others, and co-operation between the local authorities and Scottish Board of Health on the one hand and the institute on the other had been especially beneficial in the outlying regions of the Highlands and islands, where difficulties were greatest. It was a statistical fact that the children whose first month of life was supervised by the nurses of the institute had three times the chance of survival enjoyed by children otherwise tended. The adoption of the report was seconded by Mrs. Burnett Smith (Annie S. Swan). A letter was read from H.R.H. Princess Louise, president of the Scottish branch of the institute, expressing satisfaction at the improvement in the financial position which had been achieved.

CENTRAL MIDWIVES BOARD FOR SCOTLAND.

At a meeting of the Central Midwives Board for Scotland for the hearing of penal cases, Dr. James Haig Ferguson in the chair, it was reported that a certified midwife had been found guilty of attempting to procure abortion and sentenced to twelve months' imprisonment, and it was resolved that the secretary be directed to remove her name from the roll of midwives and to cancel the certificate, and in addition thereto, in terms of Section 8 of the Midwives (Scotland) Act, 1915, to prohibit her from attending women in childbirth in any other capacity. At the same diet it was reported that a certified midwife had been found guilty of performing an illegal operation on a young woman, as the result of which the woman died, and the midwife was sentenced to three years' penal servitude. Mr. Gibson, advocate, instructed by Messrs. Lindsay, Cock, and Dickson, S.S.C., appeared and made a statement on behalf of the nurse. The Board resolved that the secretary be directed to remove the name from the roll of midwives and to cancel the certificate, and in addition thereto, in terms of Section 8 of the Midwives (Scotland) Act, 1915, to prohibit her from attending women in childbirth in any other capacity.

Correspondence.

TROPICAL AUSTRALIA.

SIR,—In the BRITISH MEDICAL JOURNAL of September 17th (p. 507) there appeared a reference to the possibility of peopling the tropics with a white race, with special reference to Australia. The note concludes as follows: "Meantime, in North Queensland a great experiment is in progress. Several generations may have to pass before conclusive results can be obtained."

Several generations have already passed, and the result of the experiment so far is most satisfactory. The future must necessarily speak for itself. The essential feature of life in tropical Australia is its almost complete freedom from tropical diseases. There is no reservoir of an infected native population, and consequently the problem is limited to the consideration of the question: Can heat, and heat alone, cause serious damage to the white race? So far the answer is unequivocal. Apparently there is no other tropical country on the globe from which tropical diseases are absent. It is this circumstance which explains the popular misunderstanding of the Australian position. Beliefs of the kind die very hard, and one is reminded that more than a century ago apparently sensible Englishmen predicted that a healthy white race could not be reared in the latitude of Sydney. The facts speak for themselves. The population of tropical Queensland increased 15.28 per cent. during the decennium 1911-21, whereas in the Commonwealth as a whole the increase was 9.11 per cent. in rural areas and 19.10 per cent. in provincial urban areas.

The vital statistics are striking: the birth rate is higher than in any other part of Australia, and the total death rate is 7.4, as against 9.87 for the Commonwealth. The infantile death rate for the whole of Queensland (which lies north of the 29th parallel) was lower that that of the Commonwealth in nine out of the ten years. The infantile mortality of tropical Queensland is lower than that of the whole of Queensland. It follows, therefore, that residents of tropical Queensland have a better expectation of life, whether in infant or adult life, than anywhere else in Australia, or, indeed, almost anywhere else on the globe. So far elaborate physiological investigation has failed to disclose any serious organic changes in residents of tropical Queensland. The results are the more remarkable, for until recently neither the housing nor sanitation in that country was such as to command admiration. The literature on the subject is now extensive, and a number of the references are set out by me in *United Empire* of July, 1927, the journal of the Royal Colonial Institute, London.

In my judgement some time must elapse before an educated public realizes that in the tropics it is disease that does the damage. Heat may be at first unpleasant, but with sensible adaptation even that feature may be mitigated. Nearly three-quarters of a century of settlement in tropical Queensland indicates that no serious organic damage need be anticipated.—I am, etc.,

Melbourne, Nov. 8th. JAMES W. BARRETT.

TREATMENT OF CANCER BY RADIUM.

SIR,—When a gynaecologist is consulted by a patient with carcinoma of the cervix it is his solemn duty to advise the method of treatment which he *knows* to have the best chance of curing the condition—drugs, operation, or radium—and our present difficulty is that, whilst we have definite statistics of the result of operation, we have none in this country for radium.

For the operation many foreign statistics are available, and in this country Berkeley and Bonney published statistics on a five-year basis in 1916; Bonney on a five-year basis in 1921 and on a ten-year basis in 1927, and in this year I published mine on a five- and seven-year basis. At the end of five years Bonney had 39.7 per cent., and I had 39.5 per cent. alive and well, figures sufficiently close to show that about 40 per cent. is the number we can reasonably expect to be alive after five years from Wertheim's operation in the hands of those who regularly perform this operation.

The Manchester Radium Institute has been treating these cases for twelve years and the London Radium Institute for a longer period, so it is surely not asking very much of British radiology to publish statistics on, at any rate, a five-year basis.

Granted, the largest percentage of these cases are advanced inoperable ones, but every gynaecologist refers some early cases for radium treatment because the general condition of the patient does not warrant such a severe operation. When I refer such a patient I always label it as an operable case, and presume other gynaecologists do the same; or, if not, this question could easily be asked, and so a record kept at the institute of these operable cases. It is the result on these cases which we desire and require if we are to give the best advice to our patients.

Inoperable cases I always refer for radium treatment; how far these are benefited hardly enters this discussion; what we want is the result of radium treatment after five to ten years upon operable cases.

The letters of Drs. Forsdike and Birkett are not in the least helpful.

Every gynaecologist is familiar with the statistics of Stockholm and New York, but we are treating cases in England and we have a right to know, before we send early cases for radium treatment, whether English radiologists are obtaining results which are in any way comparable to these or to the figures published by Berkeley, Bonney, and myself. If Dr. Birkett desires I will gladly publish the results of operable cases I have referred to the Radium Institute; so far I have refrained, as I was in hopes, from the much larger figures at his command, that he would show much better results.—I am, etc.,

Manchester, Dec. 20th. WM. FLETCHER SHAW.

SIR,—In your interesting leading article of December 10th on late recurrences of cancer you state that "the undoubtedly good effects of radium and *x* rays on certain malignant tumours seem to be due in the main to the stimulation of fibrous tissue with its indirect action rather than to selective lethal action on the cancer cells."

That theory I am glad to say has been proved to be entirely erroneous by Lacassagne in Paris and R. G. Canti in this country. If sections are taken immediately after irradiation the selective action on the cancer cells is very obvious, and there is, of course, at that time no evidence of fibrous tissue.

The error has come about from sections cut several weeks after irradiation, when any cancer cells which may have survived are surrounded by fibrous tissue.

This may seem a very small point, but, as I have mentioned before, our great hope in the future of radiology is in finding out why the radium has this selective action on cancer and other quickly growing tissues, and what are the exact chemical and physical changes that take place in such cells, but do not take place in the less active tissues.—I am, etc.,

London, W.1, Dec. 20th. MALCOLM DONALDSON, F.R.C.S.

THE PROBLEM OF MENTAL DEFICIENCY.

SIR,—May I be permitted to point out that the policy for dealing with the mental deficiency problem advocated in the current annual report of the Besford Court Mental Welfare Hospital for Children, so far from being "retrograde," is in advance of that advocated by your correspondent Dr. L. A. Parry (BRITISH MEDICAL JOURNAL, December 17th, p. 1166), in that the latter appears to favour a policy which was once advocated in the United States, but which has since been discarded by all recent American writers as impracticable and unnecessary. I refer to what is known as the "policy of wholesale segregation." Similarly, in our own country, Miss Evelyn Fox, in a paper she read at the meeting of the British Association at Liverpool in 1923, pointed out that the policy of wholesale segregation may be ruled out at once by the mere consideration of numbers involved—"150,000 at the lowest estimate"—and advocated "restricted segregation" of those who otherwise would be destitute and of those showing persistent antisocial tendencies, with supervision of the remainder *in the community*.

The truth is: the same objection applies to the policy of the wholesale segregation of defectives as applies to that of sterilization—namely, that it would be necessary to segregate, not only all certifiable defectives, but also every person of neuropathic diathesis. It is now known that the formidable list of antisocial acts attributed at one time to the mentally defective has been grossly exaggerated. Dr. Watson, senior medical officer of Brixton Prison, gives as his experience that criminals as a whole are of slightly superior intelligence to that of the general population. The report actually advocates the policy of "restricted segregation." The Besford policy is the transformation of the educationally unfit child into the socially and industrially fit young person—nothing retrograde about that!

With regard to the marriage question: the Besford report nowhere *encourages* the marriage of any type of defective, and distinctly states that those who have been certified as feeble-minded persons within the meaning of the Mental Deficiency Act, 1913, "might rightly be prevented by the State from freely meeting the other sex." Dr. Tredgold, who is almost as well known as a leading member of the Eugenics Society as he is as a leading specialist in mental deficiency, while admittedly advocating the prohibition by law of the marriage of defectives, expresses the opinion, in his recent Galton lecture, that it is doubtful whether even the total abolition of propagation by defectives would produce any considerable effect at all on the prevalence of mental deficiency.

Dr. Parry, while agreeing with the writer of the report in condemning sterilization, finds fault with him for condemning it on religious grounds. The writer of the report is a prominent Roman Catholic prelate, and is expounding Catholic moral theology upon four selected topics. As I am quite sure readers of the BRITISH MEDICAL JOURNAL have no desire for a discussion, in its columns, of moral theology of any kind, Catholic or other, I do not propose to reply to that part of your correspondent's letter.—I am, etc.,

ROBERT HUGHES, M.B.,
Honorary Medical Referee for Cases, Besford Court.

Stoke-on-Trent, Dec. 20th.

HOSPITAL CONTRIBUTORY SCHEMES.

SIR,—It seems to me extremely unfortunate that your correspondents and so many of the medical profession have adopted such a hostile attitude to these schemes.

Those who have studied the financial side of the hospital question must recognize that it is only the help of contributory schemes that has prevented hospitals from that confession of failure, closure of wards and limitation of benefits, that hospitals can give. The only alternative is a State hospital service, which the opinion of the public and of the majority of the profession is strongly against.

I am proud of having founded a very successful contributory scheme, and my intimate knowledge of this and of others has shown me that, far from being attempts to exploit the profession, they are taken up by the best of the artisan and labouring class with the one idea of helping the hospitals and the sick.

It is very obvious that non-members (of the same class) using the hospitals cannot pay the maintenance charge in full—their average payment here being only about 6s. a week, whereas our contributory scheme during a similar period paid £2 3s. 10d. a week, and we should have paid the total cost of £2 14s. 6d. had it not been for a number of members (with surgical tuberculosis) who were in for very long periods.

In a widespread movement such as this mistakes are bound to happen—for instance, that made by some schemes in not insisting on a medical certificate when treatment is necessary. With us a medical certificate has been compulsory from the beginning.

The British Medical Association has adopted the policy that the staff should negotiate with the hospital committee regarding payment, and 20 per cent. has been suggested as the official percentage. Very generously this has seldom (if ever) been asked for in general hospitals, and that it is generous can be seen from the fact that in our infirmary here, with an average of about 125 occupied beds, a sum of £1,200 would have gone to the staff fund in 1926 under that scale.

I should like to comment on some of Dr. Fothergill's deductions in your issue of December 10th (p. 1119).

1. For country hospitals our experience is that the premium—all that the agricultural labourer can afford to pay—is adequate, and, even were it not so, they are of the class for whom these *charitable funds* were given. In fact, they are of the same class as the rest of the patients, who are in nearly all cases able to pay the premium, but are thriftless, and do not do so.

2. In an agricultural district an income limit would be disadvantageous to the profession, as those who work among farmers and smallholders must know.

3. The medical certificate should be the safeguard here, but some of the increase is due to the hospitals providing more and more specialist services.

6. As the schemes become financially stronger they may probably pay for consultant and specialist services.

7. I agree that in *one* department this is so—the maternity. Here a large proportion enter for reasons of convenience, and not from necessity, and the younger practitioners especially are losing not only fees but experience. The general practitioner should be allowed to attend his cases in this department.

Doubtless the British Medical Association's Hospitals Committee will further consider all the points raised, but, as a profession, we must remember that public interests—especially in health matters—must come first. Surely we can be just and strong enough in the profession to get the very best out of these schemes by helping, and not decrying, their efforts.—I am, etc.,

L. S. LUCKHAM, M.R.C.S.,
President, Salisbury and District Infirmary and Hospital League.

December 20th.

PHYSIOLOGY OF DEFAECATION.

SIR,—My letter has had the happy result of eliciting Dr. Hurst's important reply. Though, as he tells us, he was not the first to observe mass peristalsis, he, more than any other, has thrown light on the travel of the intestinal contents.

Yet in some deductions I cannot follow him. He teaches that the rectum is normally empty except immediately before defaecation. He describes how the colon, after every meal, in contrast with its passivity at other times, heaves its contents onwards. Yet I understand him to regard as normal a twenty-four-hour accumulation in the pelvic colon, only to be passed on into the rectum after the individual gets up, has a bath, and eats his breakfast.

Familiar clinical observations seem to be incompatible with this single matutinal rectal filling. How often, when a digital examination finds a rectum filled with contents, the patient is certain "the bowels were well moved that morning." Again, the subsidence of symptoms and changed outlook of a dyspeptic who forms the habit of getting a second action each day cannot well be attributed to an "unphysiological" causation.

The late Sir George Cornwall Lewis used to say that, when you condemned some measure of public polity as "unconstitutional," all your condemnation amounted to was "that you did not approve of it." In saying that an action after each meal is "unphysiological" Dr. Hurst's disapproval is, perhaps, relative and not absolute—relative to the circumstances of modern civilization. For he states, in his famous work on constipation,[1] that Bulgarian and Turkish peasants habitually open their bowels after each of their three meals. Many other primitive peoples, notably some sections of the population of Northern India, are said to have similar habits. That whole races, nearer to the natural state than ours, should follow a bodily habit which is "contrary to nature"—which I take to be the literal meaning of unphysiological—is unlikely.

"I can only eat manchet bread," a patient, a *grande dame* of the old school, once said to me. The phrase had a mediaeval flavour. One's mind went down to the old water-mill and the miller, assiduously passing the meal through "the silks," and reserving the whitest flour for my lady. (Perhaps that was why she suffered from "the vapours.") The middle-class housewife a generation back

[1] *Constipation and Allied Intestinal Disorders.* Oxford Medical Publications, 1919, p. 19.

knew better. She would only have "household" flour, which contained much of the germ and aleurone cells.

The false social *cachet* which has clung to the colour of bread, though it did not deviate her from the wholesome tradition, deceived the artisan's wife, and does so still; and among the "circumstances of modern civilization" are the modern miller's sixteen pairs of steel rollers, which eliminate, as offal, the germ and the other parts of the grain that hold the "water-soluble B."

No one doubts that a single action a day is so common as to be the general rule. Whether, with a less sophisticated diet, it would be; whether it is healthy that it should be; whether a higher plane of bodily efficiency and a clearer-headed mentality would be maintained if it were not, and if, instead, two actions were the rule, seem to be questions which are at least arguable.—I am, etc.,

Holmes Chapel, Cheshire, Dec. 6th. LIONEL JAS. PICTON.

THE WEIGHT OF THE BRAIN AND MENTAL ABILITY.

SIR,—I was much interested in Sir Arthur Keith's article on the brain of Anatole France, and in his remarks with regard to mass of brain and complexity of mental reaction (December 3rd, p. 1048).

The weight of this brain, 1,017 grams, is certainly remarkably low, and is no greater than that of many mentally defective people. The brain of a cretin, whose mentality was hardly equal to that of an animal, weighed more than this—that is, 1,033 grams—though the cretin's weight was only 2 st. 4 lb. A great mass of brain does not necessarily signify even normal intelligence, and the reverse may be true, although about this there is little information available.

I have recently examined a brain which weighed 1,670 grams—that is, about 300 grams greater than the average. It was from a case of pituitary infantilism with pronounced mental defect, and as the patient only weighed 5 st. the increase could not be ascribed to an increase of the "corporeal concomitant" element. A superficial examination of this brain, apart from the clinical history, might have led to the conclusion that it was highly developed. Preparations such as Weigert-Pal stained more readily than usual. Chemical analysis showed, however, that the amount of phosphorus compounds was only about half that in the normal brain. Even, therefore, when the architecture of the brain is normal, there may be some defect in another direction impairing its activity.

Another point of view that may be raised is that there are areas of the brain relatively undeveloped as regards function, although it is impossible to detect this by any laboratory method. In most people the left hemisphere is functionally rather more highly developed than the right—for example, speech is almost entirely a function of certain cortical areas on the left side of the brain. Yet the predominance of the left hemisphere in this respect is not accompanied by greater complexity of histological structure of these areas compared to similar ones on the right side of the brain. There is not any difference to be ascertained by chemical analysis, nor is asymmetry of the brain a common phenomenon.

One may imagine that the brains of people of little mental ability, though perhaps of average weight, may possess a relatively greater number of non-functioning though anatomically perfect areas.

Finally, one may find an analogy between the brain and a musical instrument. The excellence of the music produced does not depend only on the use of a fine instrument, although obviously this is an advantage.—I am, etc.,

ELIZABETH COWPER EAVES.

The University, Sheffield, Dec. 4th.

TREATMENT OF PROSTATIC ENLARGEMENT.

SIR,—The letter of Sir Thomas Carey Evans in your issue of December 10th (p. 1114) invites comment.

He commences by stating that the death rate of prostatectomy in the large general hospitals is 40 per cent. (He quotes someone else's statistics without giving the year in which they were compiled—it is impossible to suppose that they refer to the present year.) He then uses these mortality figures to suggest that the general surgeon is a dangerous fellow to employ for such an operation. For the performance of the operation, he continues, a special knack or gift is required, "which is only acquired by, or bestowed upon, individual surgeons, who eventually specialize in this particular branch of surgery." One may be pardoned if one is led to infer that the writer of that letter is himself one of those highly gifted few.

Surely there is nothing mysterious about the operation of suprapubic prostatectomy. It is often very simple; sometimes (as in other operations) it is really difficult. And it depends for its success as much on the preliminary treatment and after-treatment as on the operation itself.

Although those engaged in general surgery acknowledge with gratitude and admiration the help they derive from others whose research work and wide experience in any special subject has added to the sum of our knowledge, yet I am sure the latter would be the last to claim that in their hands, and theirs alone, any given operation could be safely and properly performed. As a matter of interest I have looked up my own books, and find that the last forty-four cases of prostatectomy have been performed without a death. I quote these figures in no spirit of boasting, and know very well that one may have had a run of luck which may suddenly be badly broken. But, if an ordinary surgeon can get results of this kind, how is one to credit the fantastic figures which Sir Thomas Carey Evans quotes, and what measure of justice does he mete out to the general surgeon when he would debar him from performing this operation? It would be interesting to know Sir Thomas's own statistics.—I am, etc.,

Sussex, Dec. 12th. PROVINCIAL SURGEON.

THE ETIOLOGY OF ECTOPIC PREGNANCY.

SIR,—Dr. Dougal, in his paper on ectopic pregnancy published in your issue of December 10th (p. 1074) lays particular stress on the mechanical factor (obstruction in the tube due to previous inflammation) as the cause of the arrest of the ovum in the tube. The comparatively small number of cases in which evidence of old salpingitis is found (much smaller, in my experience, than the 50 per cent. he mentions) suggests that this explanation is not likely to account for all or even the majority of cases.

The view that I have held for some time—but with a clearer understanding of the details since reading Dr. W. E. Dixon's paper on ovarian secretion published in the same issue—is that termination of pregnancy in the tube is due to the same cause that brings about the termination of pregnancy in the uterus, whether at full time or prematurely—namely, the defective functioning or involution of the corpus luteum.

It is known that failure of the secretion of this structure results in the cessation of all changes associated with pregnancy, amongst which we must surely include the mechanism by which the fertilized ovum is conveyed from the abdominal ostium to the uterus. If the defect in the corpus luteum is primary, or occurs so early that the ovum is still in the tube, its onward progress will be delayed or arrested, though development may continue. When failure is complete muscular contractions occur in the uterus (as at full term) and in the wall of the tube, with the result that the decidua is separated and haemorrhage takes place from the uterus and in the tube. The tubal contractions cause the severe pelvic pains, and they are strong enough to expel the ovum and clot half-way through the abdominal ostium, or to rupture the wall of the tube if it has been weakened by the developing ovum.

I do not claim that this explanation accounts for all cases of ectopic pregnancy. Ovarian and primary abdominal pregnancy do occur, and the occurrence of a "false labour" at full term is evidence that the corpus luteum has been active during pregnancy in these cases. But it does explain the simultaneous occurrence of haemorrhage from the uterus and in the tube which is difficult to account for in any other way.—I am, etc.,

Leicester, Dec. 11th. T. C. CLARE.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

Prorogation of Parliament.

WHEN Parliament was prorogued on December 22nd until February 7th the Royal Assent was signified to the Nursing Homes Registration Act, Mental Deficiency Act, Landlord and Tenant Act, Unemployment Insurance Act, Road Transport Lighting Act, Destructive Insects and Pests Act, Expiring Laws Continuance Act, Medical and Dentists Acts Amendment Act, Protection of Animals (Amendment) Act, Royal Edinburgh Hospital for Mental and Nervous Diseases Order Confirmation Act, and to other measures.

In the King's Speech proroguing Parliament one passage ran: "Striking progress has been made during the past year in providing housing accommodation for the people, and the number of houses completed in England and Wales since the armistice now exceeds 1,000,000. During the past year a greater number of new houses have been completed in Scotland than in any previous year. Substantial progress is also being made with the clearance of insanitary areas and the rehousing of displaced tenants."

Nursing Homes Registration Bill.

On December 21st the House of Lords went into Committee on the Nursing Homes Registration Bill. On the motion that the House go into Committee Lord Charnwood said he had just received a statement that objection to the proposal to delegate powers under the bill from county councils to other local authorities was taken by the Incorporated Midwives Institute, the College of Nursing, Queen Victoria's Jubilee Institute, and the Central Midwives Board. Lord Charnwood said he understood any disturbance of this clause would upset the agreement reached between two other interested bodies—the County Councils Association and the Municipal Corporations Association. In the negotiations between the three bodies first named and the Ministry of Health some misunderstanding had arisen, with the result that the bill, in the form it now was, came as a surprise to those who, being responsible for the training of the midwives of the country, had some right to a voice in the matter. He asked the Government whether it would not bring the bill afresh into the House of Lords early next session. Viscount Haldane dissented from this suggestion. There might not be time for the bill in the House of Commons next session. He was anxious to get nursing homes inspected as soon as possible. Lord Salisbury said it gave him concern year after year to see legislation necessarily scamped, but a great body of opinion in the House of Commons was anxious for the bill, as was the Minister of Health. The House then went into Committee on the bill.

On Clause 7 (power of the Minister to exempt Christian Science nursing homes) Viscount Falmouth moved an amendment to provide that the Minister of Health might at any time inspect any nursing home to which this exemption applied and might refuse exemption or withdraw exemption on the ground that provisions which the bill laid down for nursing homes generally were not observed. He remarked that under this amendment homes used by Christian Scientists would be liable to inspection for the experience and reputation of the person in charge, for general sanitation and cleanliness, and also in regard to the question of midwives. Earl Russell, who had an amendment for the omission of Clause 7, said that for the convenience of the House he would discuss it then. He had also drafted an alternative clause. He saw there might be a case for exempting from the bill, and particularly from its medical provisions, a body which did not believe in medical treatment, but he could not see why that should be limited to one particular sect. They had the Peculiar People in this country long before Mrs. Eddy. He suggested in substitution for Clause 7 a new clause to read:

> "The Minister of Health may grant exemption from the operation of this Act in respect of any nursing home which he is satisfied is being carried on without medical or surgical treatment. Such exemption may be complete or partial and shall remain in force for one year. No order of the Minister shall exempt a nursing home from the requirements of any by-law made under Section 4 (1) (*b*)"—

Earl Russell explained that the provision referred to required a report to be made of any death in a nursing home. Deaths in a nursing home in the absence of medical treatment ought to be reported, and in any case the requirements of that provision ought not to be the subject of exemption. He added that his proposed clause concluded thus:

> "An exemption granted under this section in respect of a nursing home may at any time be withdrawn by the Minister if it should appear to him that the conditions have changed."

He said he had been informed that the objections of the Minister to these wider terms are that they might let in undesirable bodies. He desired the bill to pass, and thought the clause he proposed would not imperil the chances of the measure in the Commons.

Viscount Astor said he was authorized to say that the Christian Science movement was willing to accept Viscount Falmouth's amendment. The only point which the Christian Scientists asked for was exemption from the obligation to have, in charge of all their homes or institutions, a duly qualified doctor or a duly qualified medical nurse. Neither the medical profession nor Christian Science would gain if Parliament insisted that they should try to run an institution jointly. The Christian Scientists had always tried to explain that they would welcome all forms of inspection.

Lord Haldane said the practical question was whether Parliament was to have this bill or not. He wished to pass the bill and was prepared to sacrifice logic to do it. Therefore he was against this amendment.

Earl Beauchamp said it seemed important that the bill should be amended. Of those before the House he preferred Lord Russell's and would vote for it.

Viscount Gage, for the Government, said Christian Science was not merely an unorthodox method of treating the sick; it professed to be a religion. In that respect it could be distinguished from other unorthodox methods of treatment. No other sect, whatever its beliefs, thought it worth while to submit them to the Select Committee on Nursing Homes. The opinion of the Ministry was that if Christian Science homes were not to come within the purview of the bill there must be an exemption clause. The Minister of Health thought it was not in accordance with the principle of religious toleration to refuse such a clause. It had been carefully drafted to make impossible the obtaining of exemption by a person who merely wished to use the cloak of Christian Science to carry on an irregular and unregistered nursing home. The Minister proposed in every case to consult the central authorities of the Christian Science Church. The size of that body and the fact that members of both Houses of Parliament belonged to it entitled it to special consideration. It was to be a condition of exemption that the home should bear a distinctive name—Christian Science house. The Minister wished to be entirely free of any responsibility for these homes. He was prepared, in the circular for the information of local authorities which would accompany this bill, to make perfectly clear that the whole object of listing these houses was to take away any possibility of the public imagining these houses had any State supervision at all. The Minister was relying on the Christian Science movement for information of irregularities. Two courses were open. The first would be to require the registration and inspection of Christian Science homes in the ordinary way, but with some relaxation of the conditions on qualified nurses and doctors. That would imply that the State took some responsibility for the treatment in these homes. They could claim to be registered and to receive what would be regarded as a State guarantee. The other course, which was followed in the clause, was to make patent that the home was excluded. The number of the houses was very small and they were unlikely to compete on any substantial scale with ordinary nursing homes.

The Marquess of Salisbury said the Government could not accept an amendment which radically altered this clause. Earl Russell's amendment would compel the Minister of Health to authorize any home which he was satisfied was carried on without medical or surgical treatment. In that case alone the Minister might grant exemption. There were homes where old people were taken in to die. There was no question about curing them; they just went in and died. These homes would fulfil the conditions of Earl Russell. There might be every kind of neglect, yet it would come within the terms of Earl Russell's clause. There was a great deal to be said for Lord Falmouth's amendment. He was not prepared to pledge the Government to it, but he did not resist its being put into the bill. If the Minister of Health saw a serious objection when he came to look at it he would move in the House of Commons to strike it out. Replying to an intervention by Earl Russell, the Marquess of Salisbury said the fact that the homes would be connected with the Christian Science Church was, in the opinion of the Government, a great guarantee of good faith. Under Earl Russell's amendment there would be no guarantee whatever.

Earl Russell said that, as for the homes where old people went to die, surely they were under medical observation and treatment, and were kept as well as they could be kept.

The Marquess of Salisbury said these homes were not well kept. They were a device under which unscrupulous relatives managed to divest themselves of the responsibility for looking after their old relatives. Homes of that kind ought to be stopped, but they would be covered by Earl Russell's amendment. Earl Russell said he now saw the point made by the Marquess of Salisbury, that the fact of these people being neglected would give an opportunity for claiming exemption. But had Lord Salisbury not overlooked the fact that exemption would be at the discretion of the Minister, who would grant it only if satisfied that the home was properly carried on? The Marquess of Salisbury said that under Earl Russell's amendment it would be very difficult for the Minister to refuse exemption to cases on the borderline unless the clause had words telling him what to take into account in coming to his decision. Earl Russell had not provided anything of the kind; in deciding whether exemption were possible the Minister would only have to consider whether there was medical or surgical attention. Lord Salisbury contended that either the clause must contain some directing words, which would be difficult to frame, or else the clause must be attached to some well known organization which was itself a guarantee of good faith.

The House then accepted Viscount Falmouth's amendment to Clause 7, and Earl Russell thereupon formally moved to leave out that clause in order to substitute the new clause which he proposed. On a division the clause with the amendment moved by Lord Falmouth was added to the bill.

On Clause 9 Lord Charnwood moved to omit the subsections providing for delegation of powers by a county council to a district council. He understood that, if these powers were delegated, maternity homes as nursing homes might be subject to inspection by one department, and as maternity homes to inspection by another department. The body representing the midwifery branch of the nursing profession strongly objected to that dual system of inspection. Viscount Gage said a compromise had been arrived

at after great difficulty by a large number of responsible authorities. The clause now gave the county council power to delegate any of its duties with or without restrictions that that council thought fit. They could make an exception in the case of maternity homes, although these might be in the area which was delegated in all other respects to another authority. If the clause were rejected there would be practically no hope of reaching agreement again in the House of Commons.

Lord Charnwood said that out of this unsatisfactory system of dual inspection there might occur, in a home subject to delegation, one inspection under the present bill together with, and possibly conflicting with, an inspection under the Midwives Act.

The Earl of Onslow said the authority in the case of midwives was the county council or county borough council. The only delegation permitted under Clause 9 was for purposes under this bill. He understood that, as chairman of the Royal Commission on Local Government, he himself was about to receive a letter explaining that, despite the arrangement under this bill, the Government recognized that the whole question was under the consideration of the Royal Commission, and that the Commission would form its own opinion and report in accordance with evidence which had not yet been received.

Lord Charnwood withdrew his amendment.

The bill then passed through Committee without further amendment, was reported, given a third reading, and returned to the Commons.

Later on the same day (December 21st) the House of Commons considered the amendment made by the Lords to the clause of the Nursing Homes Registration Bill respecting Christian Science houses. Mr. Chamberlain moved that the House disagree with the amendment. He said that the Marquess of Salisbury had been unable to consult him before accepting it. Christian Science houses were not nursing homes as the term was understood, and Mr. Chamberlain did not desire that the Ministry of Health should take any responsibility for them. The House of Commons then disagreed with the amendment.

On December 22nd the House of Lords decided that it would not insist on this amendment to Clause 6, and, as stated above, the bill thereafter became law.

Medical and Dentists Acts Amendment Bill.

The House of Commons, on December 21st, passed the Medical and Dentists Acts Amendment Bill through Committee without amendment, and read it a third time. This bill, which authorizes the new arrangements for transfer of medical practitioners between the British and Irish Free State registers, had already passed through the Lords, and became law on December 22nd.

Mental Deficiency Bill.—The Mental Deficiency Bill was read a third time and passed by the House of Lords on December 21st, without discussion.

Lamps on Ambulances.—An amendment added by the House of Lords to the Road Transport Lighting Bill—since become an Act—provides that the Minister of Transport shall have power by regulations to require or permit distinctive lamps to be carried in the case of vehicles used as ambulances and to prohibit similar lamps being carried by any other vehicles.

Vaccination of Prisoners.—In a reply on December 21st to Dr. V. Davies Sir William Joynson-Hicks said that in normal times no special steps were taken for the vaccination of prisoners except with convicts sentenced to penal servitude, who, unless they presented good vaccination marks, were vaccinated before removal to the convict prison. During an outbreak of small-pox in the area where a local prison or convict prison was situated or in areas from which prisoners were received, it was the practice to vaccinate prisoners who had not been vaccinated within recent years. Mr. Shepherd asked whether prisoners had any choice whether they would be vaccinated. Sir William said he had never heard of any complaints from them.

Milk Inspection.—On December 21st Dr. Vernon Davies asked whether the Minister of Health was aware that in the county of Nottingham, during 1924, 43 samples of milk were analysed, of which 97.7 per cent. were adulterated; during 1925, 73 samples, of which 60.2 per cent. were adulterated, and during 1926, 62 samples, of which 54.8 per cent. were adulterated, and whether he would impress on local authorities that for the health of their infant population they should institute a vigorous campaign against food adulterators by analysing yearly a much larger number of samples. Sir Kingsley Wood said it was the practice of the inspectors in Notts to take a large number of samples informally and to carry out rough sorting tests to ascertain where adulterated milk was sold. Formal samples were then taken at these places for submission to the public analyst. The published returns only referred to the latter samples, and the high proportion of adulteration recorded was a natural result. The method was a new one adopted by the county of Nottingham. The Minister of Health would consider whether advice could usefully be given to local authorities counselling the taking of a larger number of samples where past experience showed an adulteration of over 5 per cent. in common articles of diet amongst the poor. In a reply to Dr. V. Davies on the same question on December 22nd, Sir W. Joynson-Hicks said that in the county of Nottingham during 1924 there were 16 prosecutions for the adulteration of milk; in 1925 11, and in 1926 13. In the city of Nottingham and the borough of Newark the additional figures were 17, 4, and 10 for the respective years.

Notes in Brief.

From 1918 to December 15th, 1925, £5,186,833 was paid as compensation for animals slaughtered as a result of foot-and-mouth outbreaks. The Government is not prepared to offer a monetary reward for an effective remedy or preventive of this disease.

It will be illegal to sell in this country as olive oil the mixed oil composed of olive oil and oil from ground nuts, the production of which has been authorized this year in Spain.

The attention of the Minister of Health has not been drawn to the refusal of the London County Council to licence an x-ray massage establishment. Sir Kingsley Wood adds that he does not think legislation on the subject to be practicable at present.

The Minister of Transport does not see his way to amend the Regulations issued to prevent noise by motor cyclists.

Sir Kingsley Wood again states that approved societies have no power to set up dental clinics.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examination indicated:

FINAL B.M., B.CH.—*Medicine, Surgery, and Midwifery*: L. W. H. Berlin, D. H. Brinton, H. A. Byworth, A. W. Cubitt, H. P. Gilding, R. E. Havard, A. P. Kingsley, J. C. Neely, R. Oddie, E. M. B. West, A. L. Wilkinson, Olivia H. Lister. *Materia Medica*: H. S. Atkinson, A. H. Bateman, F. Bell, M. V. Bhajeker, G. H. Buck, C. M. Duncan, S. Durham, J. K. Marshall, R. D. Newton, J. C. Nicholson, T. R. Plummer, A. Secker-Walker, W. B. Williams, Victoria M. Robinson. *Pathology*: W. J. Cotton, H. R. J. Donald, J. M. Gibson, H. M. Harris, R. S. Harrison, A. J. M. Melly, F. G. Parker, R. L. P. Peregrine. *Forensic Medicine and Hygiene*: O. A. Beadle, A. R. Bowtell, A. W. Cubitt, H. P. Gilding, R. E. Havard, A. J. Leslie-Spinks, M. G. Pearson, A. E. Porritt, L. T. Ride, E. E. Swaby, E. M. B. West, Margaret A. L. Herbertson.

UNIVERSITY OF CAMBRIDGE.

MR. H. L. H. H. GREEN, M.A., has been appointed a university demonstrator in anatomy for three years.

The following candidates have been approved at the examination indicated:

THIRD M.B.—*Surgery, Midwifery, and Gynaecology*: M. C. Andrew, W. R. Ashby, D. H. Belfrage, W. V. Boyle, W. Buckley, A. J. W. Chamings, A. D. Charters, S. F. L. Dahne, J. T. Dunkerley, J. L. H. Easton, J. Foster, L. Foulds, J. L. Franklin, T. O. Garland, J. M. Graham, R. A. P. Gray, A. C. Hampson, L. T. Hilliard, W. H. Hubert, E. R. Keeble, M. Koettlitz, T. E. Lamech, J. M. Lees, W. J. Lloyd, R. A. McGhance, D. J. MacMyn, W. N. Mascall, W. R. Mashiter, J. B. Murray, R. L. Osmaston, E. A. E. Palmer, V. R. Palmer, T. N. Parish, R. E. M. Pilcher, G. W. Pimblett, L. J. Rae, E. G. Recordon, W. H. G. Reed, F. A. Richards, R. W. N. Robins, G. Rocyn Jones, J. I. Sapwell, S. W. Savage, L. Shillito, F. Smith, T. R. Smith, W. Smith, E. T. C. Spooner, B. Stewart, G. S. Storrs, I. C. C. Tchaperoff, D. R. Tweedie, W. E. Underwood, F. H. Ward. *Women*: A. G. Clegg, C. P. Giles, E. M. Hoskin, M. P. Shackle. *Principles and Practice of Physic, Pathology, and Pharmacology*: G. M. Addison, R. G. Aptlorpe, J. R. Armstrong, G. H. Barendt, W. J. H. M. Beattie, H. Bell, B. Blaxill, G. J. O. Bridgeman, W. A. Briggs, J. W. D. Buttery, A. D. Charters, G. C. Dewes, G. A. Eason, T. I. Evans, J. Foster, H. Girling, S. J. P. Gray, M. J. Harker, R. T. James, G. K. Kirwan-Taylor, M. E. Lampard, L. C. Lancaster, R. M. B. MacKenna, W. S. Maclay, R. W. L. May, G. C. Milner, F. J. Milward, J. K. Monro, W. J. Moody, D. E. Oakley, R. L. Osmaston, C. L. Potts, P. E. Pym, J. B. W. Roberton, J. W. Shackle, M. B. Sinclair, J. F. Stent, T. R. Stevens, D. R. Tweedie, S. Tyagaraja, K. H. Uttly, J. R. S. Webb, W. J. Wilkin, D. B. Wilson, R. M. Windeyer, C. G. Windsor, E. C. Wynne-Edwards. *Women*: I. Cake, A. R. Glover, E. V. E. Whidborne.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examination indicated:

M.S.—*Branch I (Surgery)*: C. F. Beyers, E. W. Riches, G. B. J. A. Robinson, M.D., R. M. Walker (*University Medal*).

UNIVERSITY OF LEEDS.

A MEETING of the council of the University of Leeds was held on December 21st. Professor J. K. Jamieson, Dean of the Faculty of Medicine, was appointed the representative of the University on the General Medical Council. Dr. C. W. Vining was appointed to the newly instituted chair in diseases of children, and Dr. J. T. Ingram was appointed lecturer in diseases of the skin, in succession to Dr. Veale, who is now Professor of Pharmacology and Therapeutics.

A graduation ceremony was held at the Leeds School of Medicine on December 20th. Dr. J. B. Baillie, the Vice-Chancellor of the University, presided, and reminded the successful students that the public would expect from them vigilant and exacting service on behalf of the public health and the individual welfare. The realization was dawning in the community that the progress of civilization depended not only on the increase and expansion of general education, but also on the maintenance of sound health, which was the task of the medical practitioner. As students they must have realized how little exact knowledge there was in the

science of medicine, and what a vast region still awaited exploration. It would be their duty to use their scientific training to enlarge the boundaries of medical knowledge. The medical profession was one of the oldest and most humane, but there seemed to be serious obstacles in the way of the placing of it on a scientific basis. The science of medicine in its study of the constitution and functions of the human organism might be said to be a systematic attempt to obey the command of the Delphic oracle, "Know thyself"; the history of medicine illustrated the difficulty of doing this. The medical profession to-day appeared to be on the threshold of a new era of discovery; the present time of scientific adventure must stimulate their imagination and enliven the future with hope.

The following were among the degrees conferred:

M.D.—Desirée M. B. Gross (with distinction).
M.B., Ch.B.—*F. Grundy, *W. Hyman, F. V. Allen, J. Benson, J. Caplan, M. M. Day, Mildred I. Ealing, W. Levi, Mary Lightowler, W. Milligan, J. H. Philips.

* Second-class honours.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following candidates have been approved at the examination indicated:

PRIMARY FELLOWSHIP.—J. A. Corkey, J. M'Grath, M. J. Riordan.
FINAL FELLOWSHIP.—J. J. Brennan, W. C. Somerville-Large.

The following prizes have been awarded:

Senior Systematic Anatomy: 1st prize and medal, G. A. Buggle; 2nd prize and certificate, J. Lewis. Senior Practical Anatomy: 1st prize and medal, G. A. Buggle; 2nd prize and certificate, J. Lewis. Senior Surface Anatomy: 1st prize and medal, G. A. Buggle; 2nd prize and certificate, A. L. Stein. Stoney Memorial Gold Medal: G. A. Buggle. Physiology: 1st prize and medal, Annie J. Dunlevy; 2nd prize and certificate, J. L. Hampson. Histology: 1st prize and medal, J. N. S. Dormer; 2nd prize and certificate, P. A. Fox. Forensic Medicine: 1st prize and medal, J. D. H. Widdess; 2nd prize and certificate, J. Lewis. Pathology: 1st prize and medal, M. H. O'Reilly; 2nd prize and certificate, T. J. A. M Hugh. Midwifery: 1st prize and medal: W. G. Greene. MacNaughton-Jones Gold Medal: C. P. O'Toole. Medicine: 1st prize and medal, V. T. J. Lynch; 2nd prize and certificate, A. J. Devlin. Operative Surgery: gold medal, T. P. Garry; silver medal, V. T. J. Lynch.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examinations indicated:

FINAL EXAMINATION.—W. Bannan, J. J. Benson, J. Chambers, A. Clein, L. S. Clifford, J. P. Egan, F. N. Elcock, J. J. Golding, J. L. Miller, May F. M'Carthy, P. L. O'Neill, Sarah M. O'Neill, J. C. Richardson, A. Stein, F. W. Warren.
D.P.H.—R. F. G. Dickson, A. Halpenny.
DIPLOMA IN PSYCHOLOGICAL MEDICINE.—J. F. W. Leech, M. A. Walsh.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have passed in the subjects indicated:

SURGERY.—K. D. C. Beckitt, A. F. Brigmen, L. J. Corbett, H. S. Marks.
MEDICINE.—K. E. Clarke, H. M. de Hartog, J. Miller, J. L. M. Wood.
FORENSIC MEDICINE.—L. J. Corbett, H. M. de Hartog, H. W. Maurer, I. O. B. Shirley.
MIDWIFERY.—S. A. Carr, G. L. McDermott, H. Tenenbaum.

The diploma of the Society has been granted to Messrs. A. F. Brigmen, S. A. Carr, H. M. de Hartog, J. Miller, and J. L. M. Wood.

Obituary.

DR. THOMAS W. CLAY died suddenly on December 17th, aged 58 years. He was born at Holyhead, the son of Captain Clay, R.N.R., and received his medical education at the school of the Royal College of Surgeons of Edinburgh. He took the triple qualifications of the Scottish Conjoint Board in 1891, and served as assistant demonstrator in anatomy at the Surgeons' Hall, Edinburgh. Dr. Clay had been in practice in Holyhead for thirty-three years. He was for many years medical officer of health for the Holyhead urban district, was a member of the Holyhead board of guardians, and also port sanitary medical officer and medical inspector of seamen, as well as deputy coroner for the county of Anglesey. Dr. Clay was a justice of the peace for Anglesey, and a member of the North Carnarvon and Anglesey Division of the British Medical Association. Mr. Keith Monsarrat (Liverpool) writes: Dr. T. W. Clay spent all his professional life in Holyhead, where he had been the foremost medical practitioner for many years. His practice extended throughout Anglesey, and there was probably no village in the county where his name and reputation were not known. He lived an exceedingly laborious life throughout his thirty-five years of practice, and, though of late he had some assistance, his work was so personal and his personality so outstanding that he could not in fact hand over more than a small fraction of the calls that were made upon him. The innumerable friends of "Clay of Holyhead" were bound to him by ties of real affection. His simplicity, his singleness of purpose, and his strength of character were recognized by all who had to do with him. He possessed ability of a very high order. I believe that it was the universal opinion of those privileged to work with him that his powers of diagnosis and of unravelling difficult clinical problems were unusually acute. He had an exceptionally observant mind which seldom missed a fact of importance. Clay was a "good doctor" in every sense of the term. During the war he did a great deal of work in the war hospitals of that town, and later for the Ministry of Pensions in the Lady Thomas Convalescent Home. His one recreation was shooting. He was captain of the Holyhead Golf Club in 1925, but did not in fact play golf. His house in Holyhead was famed for its hospitality; generous and large-hearted, the impressive scenes at his funeral on December 20th showed very plainly the place he occupied in the hearts of the people of Holyhead and Anglesey.

DR. LEWIS THOMAS FRASER BRYETT died on December 14th in his 63rd year. He was a student at King's College, London, and took the diplomas of L.S.A. in 1887, M.R.C.S., L.R.C.P.Lond. in 1888, graduated M.B.Lond. in 1890, and proceeded to the M.D. in 1892, in which year he also took the D.P.H. He served as Sambrooke medical registrar, house-physician, and tutor at King's College Hospital, and assistant demonstrator of anatomy at King's College. In 1893, when he was appointed medical officer of health for the Borough of Shoreditch, the death rate there was 25.5 per 1,000, whereas in 1926 it had fallen to 12.2; the infantile mortality had fallen in the same period from 196 per 1,000 births to 64. Dr. Bryett was a Fellow of the Society of Medical Officers of Health and a member of the City Division of the British Medical Association. He held a commission as major R.A.M.C.T. At a meeting of the Shoreditch guardians held on December 14th a vote of condolence with the relatives was adopted.

DR. JAMES AUSTIN DICKIE, who died on December 9th, at the age of 51, at his residence in Morpeth, received his medical education at Glasgow, where he graduated M.B., Ch.B. in 1899. He practised in Shipley, Yorks, and subsequently in Poole, where he held an Admiralty appointment and was honorary anaesthetist to the Cornelia Hospital. In 1915 he joined his brother, Dr. Hugh Dickie, in Morpeth, and was medical officer for the post office and for a district of the Morpeth Union. In his youth he was a keen athlete; he won the 220 yards championship of the West of Scotland for two years in succession, and took great interest in Rugby football and lawn tennis. He leaves a widow, a son, and a daughter.

Medical News.

A MEETING of the Tuberculosis Society will be held at the house of the Royal Society of Medicine on January 20th, at 8 p.m., when the draft constitution and by-laws will be submitted for approval. A discussion will also be held on the work and aims of the tuberculosis care committees and kindred agencies.

THE paper on the prevalence and prevention of diphtheria in Hampstead which was read by Dr. Graham Forbes at a meeting of the Hampstead Division of the British Medical Association on May 12th (JOURNAL, June 25th, page 1144) has been published in *The Journal of Hygiene* for November 29th.

MR. H. BARON, chairman of the Seamen's Hospital Aid Committee, has given a Christmas gift of £1,000 to the Dreadnought Hospital, Greenwich, for the endowment of a bed. This makes the eighth bed endowed by the committee during the last ten years.

DR. ARTURO CASTIGLIONI, professor of the history of medicine at Padua, has been elected a Fellow of the Royal Society of Medicine.

THERE were 127,245 births in Austria in 1926 as compared with 153,477 in 1913, and the death rate was 14.9 per cent. in 1926 as compared with 14.4 per cent. in 1925.

THE report for 1926 of the Laura Spelman Rockefeller Memorial, of which John D. Rockefeller, jun., is the president, has just been published, and shows that during that year the appropriations made to various institutions was nearly seven million dollars, rather more than two million dollars being payable in that year, the remainder in 1927 and subsequent years. Social science, research institutions in America and abroad, conferences, travelling fellowships, child study and parental education, boy and girl scouts, and libraries were helped by grants.

THE second congress entitled the "Journées Médicales et Vétérinaires Marocaines" will be held next Easter, at Casablanca and Rabat. Professor Leriche and others will read papers on the grafting of glands and tissues in man and animals. Professor Calmette will speak on the use of B.C.G., Dr. Ramon on anatoxin, Professor Cruchet on mesoencephalitis, and Dr. J. Renault on the general hygiene of a large modern town. Excursions will be arranged in connexion with this congress. Further information may be obtained from the general secretary, Dr. Lépinay, Rue de Marseille, Casablanca.

THE mortality in the forty larger towns in Germany was lower in the first half of 1927 than in the corresponding period of 1926—namely, 10.1, as compared with 10.3 per 1,000 inhabitants; the mortality among children under 1 year of age was 1.2 as compared with 1.3, and the mortality from tuberculosis 1.01 as compared with 1.28. The depopulation of rural districts is still on the increase, as is shown by the fact that the population of the forty large towns was 16,881,000 in 1926 and 17,360,000 in 1927.

EXTRACTS from the annual report of the Ministry of Health for 1926–27, dealing with the administration of the Poor Law, and including reports of general inspectors of the Ministry, have been issued separately by H.M. Stationery Office for official use at the price of 1s.

Letters, Notes, and Answers.

All communications in regard to editorial business should be addressed to ***The EDITOR, British Medical Journal, British Medical Association House, Tavistock Square, W.C.1.***

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the BRITISH MEDICAL JOURNAL must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the JOURNAL, should be addressed to the Financial Secretary and Business Manager.

The ***TELEPHONE NUMBERS*** of the British Medical Association and the BRITISH MEDICAL JOURNAL are *MUSEUM 9861, 9862, 9863,* and *9864* (internal exchange, four lines).

The ***TELEGRAPHIC ADDRESSES*** are:

EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology Westcent, London.*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*

MEDICAL SECRETARY, *Mediocra Westcent, London.*

The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 4737 Dublin), and of the Scottish Office, 6, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS.

WINTER MOTORING.

"CANADIAN" asks whether any reader can from practical experience recommend a radiator-heating paraffin lamp—safe, efficient, economical, and not too expensive?

INCOME TAX.

Change in Partnership.

"W. A. M. W.," after his return from abroad, entered his father's firm as a third-share partner as from June 1st, 1927. As from December 1st his father retired, receiving a lump sum of £300 and an annuity of one-third share. What is his liability to income tax.

*** Our correspondent's earnings are liable as from his return to this country—apart from any other reason he did not return for a temporary purpose only. Assuming the amount of the practice profits for 1926 (and, therefore, the amount of the assessment for 1927–28) to be £*x*, our correspondent's share of the assessment will be ten-twelfths of one-third of £*x*. The £300 is regarded as a capital payment and cannot be treated as a deductible expense for income tax purposes. The firm, as such, are liable to account for the tax on the whole profits, including that portion paid over as an annuity to the retiring partner, but can claim a corresponding adjustment as between the partners and the annuitant. The most convenient way of dealing with the matter would be to regard him as a sleeping partner for periods subsequent to December 1st, 1927, and, as the amount of income tax ultimately payable would not be affected, it would seem likely that the authorities would acquiesce in that course.

LETTERS, NOTES, ETC.

A DISCLAIMER.

DR. JAMES LYONS, medical officer of the Burton Road Infirmary, Lincoln, writes: I wish to disclaim all responsibility for the extravagant claims appearing in the lay press on December 21st and other dates with regard to a case of encephalitis lethargica treated at this institution. I can state definitely that these reports were acquired by the lay press entirely from extra-medical sources.

SHOCK AFTER PROTRUSION OF INTESTINES.

DR. GEO. SMITH SOWDEN (El Jin) writes: The recent correspondence in the JOURNAL on disembowelment and shock has brought to mind an incident related last summer to a colleague and myself by an officer of the Sudan Defence Force, who is in charge of one of the most southerly posts in the Sudan, and is twenty days' camel ride from the nearest medical officer and five days' camel ride from the nearest white man, and has no other white man with him, so he has to be M.O. as well as C.O. One day he espied a Sudanese staggering into the small fort, holding his hands in front of his abdomen, and with his jebbah (long loose gown worn by the natives) all bloodstained. Close examination showed that, wrapped in the folds of the filthy jebbah, were 6 ft. or 7 ft. of intestine protruding from a long incised wound of the abdominal wall. The man said that he had had an altercation with a fellow villager that morning, and had been stabbed in the abdomen with the broad stabbing knife carried by the natives, with the result that his bowels protruded. He promptly set off and walked *three miles* to be attended by the white man, whom he trusted more than he did the local "hakim." My friend at once put him into the small hospital of the fort, and, remembering that carbolic was too strong for internal use, made a solution of salt and warm water, with which he washed the protruding bowels very carefully, and then proceeded to return the intestines to the abdomen, with the help of the native sergeant-major. This was safely accomplished, and the abdominal wall closed up. The whole operation was performed without an anaesthetic. The result was even more dramatic than the operation. The man had a rise of temperature for four or five days, but otherwise showed very little trace of what he had gone through. It was with difficulty that he was kept in bed for three weeks, as his one desire was to return and wreak vengeance on his opponent. This incident is still more remarkable when it is remembered that the resistance of the black races to surgical shock is considered to be very weak, and also when the rough-and-ready treatment he received is realized. It gives the Listerian disciple "furiously to think."

DIPHTHERIA SIMULATING FOREIGN BODY IN THE THROAT.

DR. CAWLEY MADDEN (Education Department of New South Wales, Sydney, Australia) writes: I can corroborate Dr. Charles J. Hill Aitken in his report of a case of laryngeal diphtheria simulating foreign body in the larynx (BRITISH MEDICAL JOURNAL, September 17th, p. 526). In the winter of 1923 a child, aged about 12 months, was brought to the casualty department by its mother, who stated that it had "swallowed a bone" while she was feeding it with mutton broth. The child was not very well looked after, and it was impossible to get any more detailed history, so that, as far as this illness was concerned, the child had only been sick about an hour when seen at the hospital. In spite of this history the child was found to be suffering with a well marked laryngeal diphtheria, and to make doubly certain the larynx and trachea of the child were *x*-rayed, but no foreign body of any description was found. The child was eventually intubated, and finally a tracheotomy had to be performed, and I think, from memory, the child died. I was told at the time by the honorary physician (Dr. Margaret Harper) of a case in her experience in which the opposite had occurred: a child was brought to her for what was thought to be laryngeal diphtheria, but on examination she found a foreign body resting in or on the larynx. After all, is it to be wondered at that sometimes these conditions are mistaken one for the other. The membrane in laryngeal diphtheria acts very much like a foreign body, though usually, of course, the degree of toxaemia leaves little doubt of the diagnosis.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 36, 40, and 41 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 38 and 39.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page *252*.